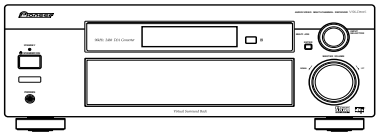
Pioneer *sound.vision.soul*

Service Manual



VSX-D811S

ORDER NO.
RRV2583

AUDIO/VIDEO MULTI-CHANNEL RECEIVER

VSX-D811S

THIS MANUAL IS APPLICABLE TO THE FOLLOWING MODEL(S) AND TYPE(S).

Model	Type	Power Requirement	Remarks
VSX-D811S	KUXJI	AC120V	
VSX-D811S	KCXJI	AC120V	

For details, refer to "Important symbols for good services".

PIONEER CORPORATION 4-1, Meguro 1-chome, Meguro-ku, Tokyo 153-8654, Japan
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PIONEER EUROPE NV Haven 1087, Keetberglaan 1, 9120 Melsele, Belgium
PIONEER ELECTRONICS ASIACENTRE PTE. LTD. 253 Alexandra Road, #04-01, Singapore 159936
ⓒ**PIONEER CORPORATION 2002**
T-ZZK FEB. 2002.printed in Japan

SAFTY INFORMATION

This service manual is intended for qualified service technicians; it is not meant for the casual do-it-yourselfer. Qualified technicians have the necessary test equipment and tools, and have been trained to properly and safely repair complex products such as those covered by this manual.
Improperly performed repairs can adversely affect the safety and reliability of the product and may void the warranty. If you are not qualified to perform the repair of this product properly and safely, you should not risk trying to do so and refer the repair to a qualified service technician.

WARNING
This product contains lead in solder and certain electrical parts contain chemicals which are known to the state of California to cause cancer, birth defects or other reproductive harm.

Health & Safety Code Section 25249.6 – Proposition 65

NOTICE
(FOR CANADIAN MODEL ONLY)
Fuse symbols (fast operating fuse) and/or (slow operating fuse) on PCB indicate that replacement parts must be of identical designation.

REMARQUE
(POUR MODÈLE CANADIEN SEULEMENT)
Les symboles de fusible (fusible de type rapide) et/ou (fusible de type lent) sur CCI indiquent que les pièces de remplacement doivent avoir la même désignation.

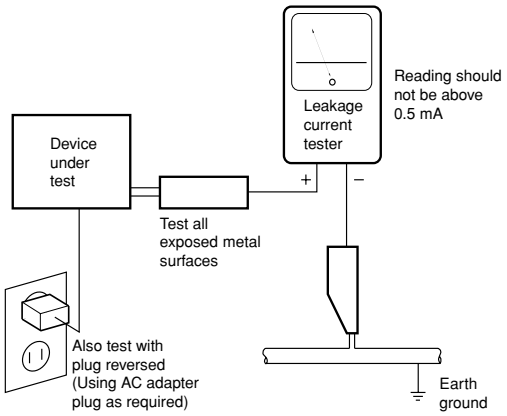
(FOR USA MODEL ONLY)

1. SAFETY PRECAUTIONS

The following check should be performed for the continued protection of the customer and service technician.

LEAKAGE CURRENT CHECK

Measure leakage current to a known earth ground (water pipe, conduit, etc.) by connecting a leakage current tester such as Simpson Model 229-2 or equivalent between the earth ground and all exposed metal parts of the appliance (input/output terminals, screwheads, metal overlays, control shaft, etc.). Plug the AC line cord of the appliance directly into a 120V AC 60 Hz outlet and turn the AC power switch on. Any current measured must not exceed 0.5 mA.


Reading should not be above 0.5 mA
Leakage current tester
Device under test
+
–
Test all exposed metal surfaces
Also test with plug reversed (Using AC adapter plug as required)
Earth ground

AC Leakage Test

ANY MEASUREMENTS NOT WITHIN THE LIMITS OUTLINED ABOVE ARE INDICATIVE OF A POTENTIAL SHOCK HAZARD AND MUST BE CORRECTED BEFORE RETURNING THE APPLIANCE TO THE CUSTOMER.

2. PRODUCT SAFETY NOTICE

Many electrical and mechanical parts in the appliance have special safety related characteristics. These are often not evident from visual inspection nor the protection afforded by them necessarily can be obtained by using replacement components rated for voltage, wattage, etc. Replacement parts which have these special safety characteristics are identified in this Service Manual.

Electrical components having such features are identified by marking with a ⚠ on the schematics and on the parts list in this Service Manual.
The use of a substitute replacement component which does not have the same safety characteristics as the PIONEER recommended replacement one, shown in the parts list in this Service Manual, may create shock, fire, or other hazards.

Product Safety is continuously under review and new instructions are issued from time to time. For the latest information, always consult the current PIONEER Service Manual. A subscription to, or additional copies of, PIONEER Service Manual may be obtained at a nominal charge from PIONEER.

[Important symbols for good services]
In this manual, the symbols shown-below indicate that adjustments, settings or cleaning should be made securely.
When you find the procedures bearing any of the symbols, be sure to fulfill them:

1. Product safety

You should conform to the regulations governing the product (safety, radio and noise, and other regulations), and should keep the safety during servicing by following the safety instructions described in this manual.

2. Adjustments

To keep the original performances of the product, optimum adjustments or specification confirmation is indispensable. In accordance with the procedures or instructions described in this manual, adjustments should be performed.

3. Cleaning

For optical pickups, tape-deck heads, lenses and mirrors used in projection monitors, and other parts requiring cleaning, proper cleaning should be performed to restore their performances.

4. Shipping mode and shipping screws

To protect the product from damages or failures that may be caused during transit, the shipping mode should be set or the shipping screws should be installed before shipping out in accordance with this manual, if necessary.

5. Lubricants, glues, and replacement parts

Appropriately applying grease or glue can maintain the product performances. But improper lubrication or applying glue may lead to failures or troubles in the product. By following the instructions in this manual, be sure to apply the prescribed grease or glue to proper portions by the appropriate amount.For replacement parts or tools, the prescribed ones should be used.

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1. SPECIFICATIONS

Amplifier Section

Continuous average power output of 100 watts* per channel, min., at 8 ohms, from 20 Hz to 20,000 Hz with no more than 0.2 %** total harmonic distortion (front).

Continuous Power Output
Front ..... 100 W per channel (1kHz, 1.0 %, 8 Ω)
Center ..... 100 W (1kHz, 1.0 %, 8 Ω)
Surround ..... 100 W per channel (1kHz, 1.0 %, 8 Ω)
Surround Back ..... 100 W per channel (1kHz, 1.0 %, 8 Ω)

Input (Sensitivity/Impedance)
CD, VCR/DVR, CD-R/TAPE/MD, DVD/LD, TV/SAT ... 200 mV/47 kΩ

Frequency Response
CD, VCR/DVR, CD-R/TAPE/MD, DVD/LD,TV/SAT
..... 5 Hz to 100,000 Hz $^{+0}_{-3}$dB

Output (Level/Impedance)
VCR/DVR REC, CD-R/TAPE/MD REC ..... 200 mV/2.2 kΩ

Tone Control
BASS ..... ± 6 dB (100 Hz)
TREBLE ..... ± 6 dB (10 kHz)
LOUDNESS ..... +9 dB/+9 dB (100 Hz/10 kHz)

Signal-to-Noise Ratio (IHF, short circuited, A network)
CD, VCR/DVR, CD-R/TAPE/MD,DVD/LD, TV/SAT ..... 96 dB

Signal-to Noise Ratio [EIA, at 1 W (1 kHz)]
CD, VCR/DVR, CD-R/TAPE/MD,DVD/LD, TV/SAT ..... 79 dB

Video Section

Input (Sensitivity/Impedance)
VCR/DVR, DVD/LD, TV/SAT ..... 1 Vp-p/75 Ω

Output (Level/Impedance)
VCR/DVR ..... 1 Vp-p/75 Ω

Frequency Response
VCR/DVR, DVD/LD,TV/SAT ⇨ MONITOR ..... 5 Hz to 7 MHz $^{+0}_{-3}$dB
Signal-to-Noise Ratio ..... 55 dB
Cross Talk ..... 55 dB

Manufactured under license from Dolby Laboratories. "Dolby", "Pro Logic II" and the double D symbol ▯▯ are trademarks of Dolby Laboratorories.

"DTS" ,"ES" and "DTS Digital Surround" are trademarks of Digital Theater Systems, Inc.

FM Tuner Section

Frequency Range ..... 87.5 MHz to 108 MHz
Usable Sensitivity ..... Mono:13.2 dBf, IHF (1.3 μV/ 75 Ω)
50 dB Quieting Sensitivity ..... Mono: 20.2 dB
Stereo: 38.6 dBf
Signal-to-Noise Ratio ..... Mono: 73 dB (at 85 dBf)
Stereo: 70 dB (at 85 dBf)
Distortion ..... Stereo: 0.5 % (1 kHz)
Alternate Channel Selectivity ..... 60 dB (400 kHz)
Stereo Separation ..... 40 dB (1 kHz)
Frequency Response ..... 30 Hz to 15 kHz (±1 dB)
Antenna Input (DIN) ..... 75 Ω unbalanced

AM Tuner Section

Frequency Range ..... 530 kHz to 1,700 kHz
Sensitivity (IHF, Loop antenna) ..... 350 μV/m
Selectivity ..... 25 dB
Signal-to-Noise Ratio ..... 50 dB
Antenna ..... Loop antenna

Miscellaneous

Power Requirements ..... AC 120 V, 60Hz
Power Consumption
VSX-D811S ..... 300W, 420 VA

In Standby ..... 1 W
AC Outlet ..... 100 W MAX. (SWITCHED)
Dimensions ..... 420 (W) x 158 (H) x 401 (D) mm
(16-9/16 (W) x 6-4/16 (H) x 15-6/16 (D) in.)
Weight (without package)
VSX-D811S ..... 10.5 kg
(23.1 lb)

Furnished Parts
AM loop antenna 1
FM wire antenna 1
Dry cell batteries (AA size IEC R6P) 2
Remote control 1
Operating instructions 1

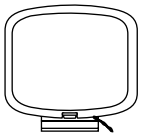
Note

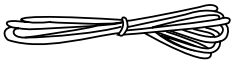
Specifications and the design are subject to possible modifications without notice, due to improvements.

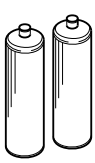
* Measured pursuant to the Federal Trade Commission's Trade Regulation rule on Power Output Claims for Amplifiers.

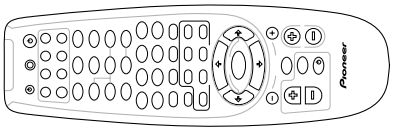
** Measured by Audio Spectrum Analyzer.

Accessories


AM loop antenna
(ATB7009)


FM wire antenna
(ADH7004)


AA size IEC R6P
Dry cell batteries (x2)

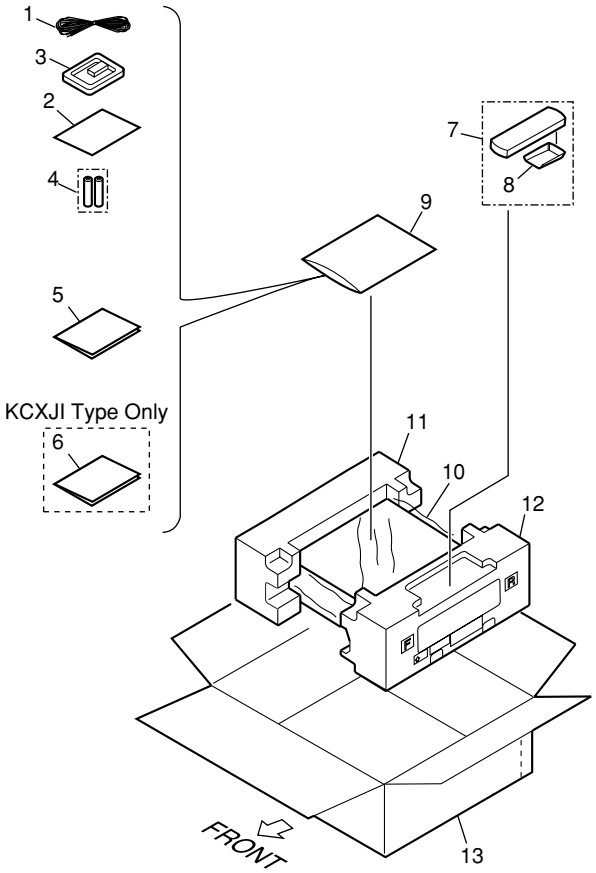


Remote control unit
(XXD3043)

2. EXPLODED VIEWS AND PARTS LIST

NOTES:
- *Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.*
- *The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.*
- *Screws adjacent to ▼ mark on product are used for disassembly.*
- *For the applying amount of lubricants or glue, follow the instructions in this manual. (In the case of no amount instructions, apply as you think it appropriate.)*

2.1 PACKING



PACKING partsList

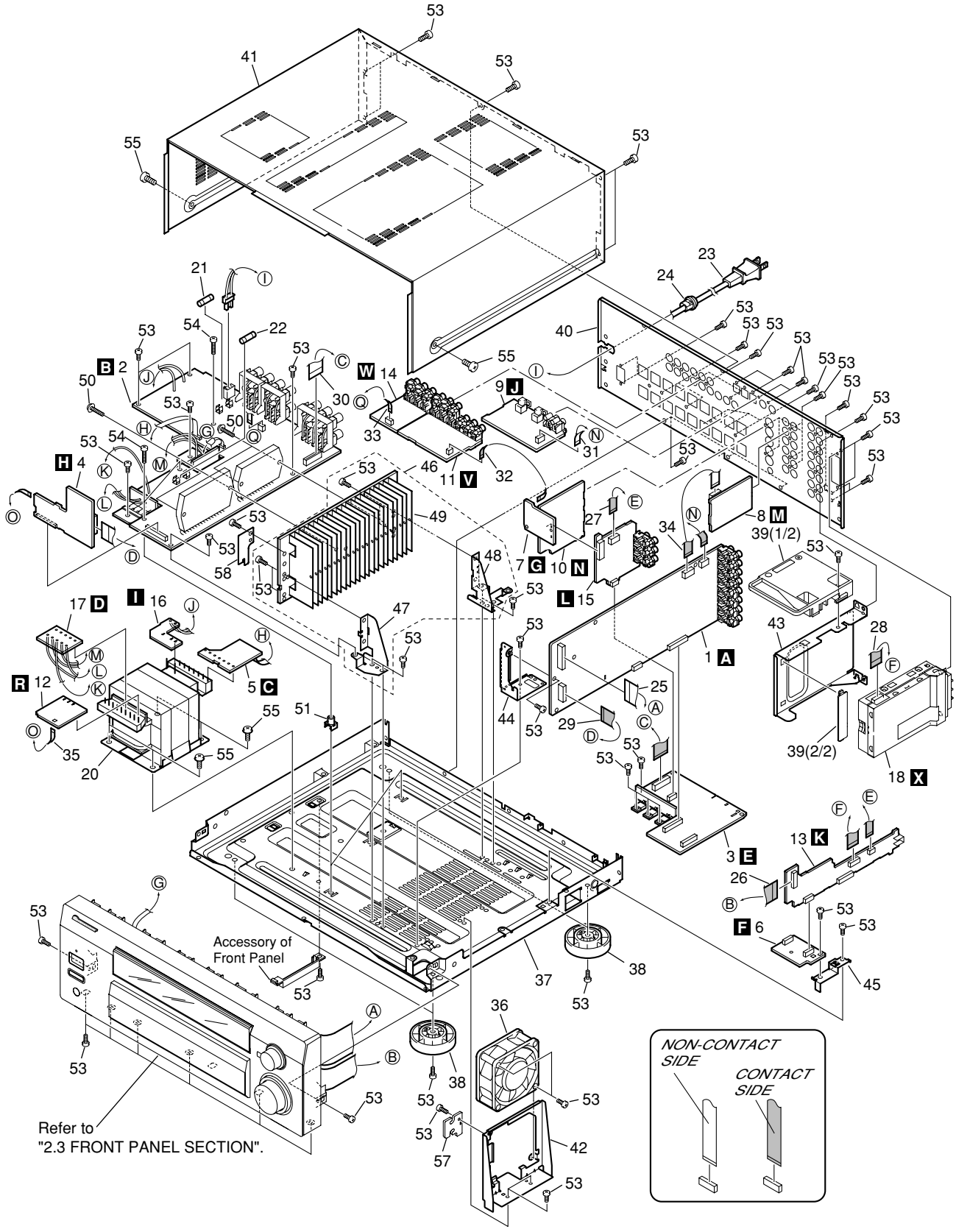
Mark	No.	Description	Part No.
	1	FM wire antenna	ADH7004
NSP	2	Warranty Card	ARY7045
	3	AM loop antenna	ATB7009
NSP	4	Dry cell batteries (AA/R6P)	VEM-013
	5	Operating instructions (English)	XRB3013
	6	Operating instructions (French)	See Contrast table (2)
	7	Remote Control Unit	XXD3043
	8	Battery Cover	XZA3002
NSP	9	Polyethylene Bag	Z21-038
	10	Packing Sheet	AHG7069
	11	Left Pad R5	XHA3032
	12	Right Pad R5	XHA3033
	13	Packing Case	XHD3202

(2) CONTRAST TABLE

VSX-D811S/KUXJI and KCXJI are constructed the same except for the following :

Mark	NO	Symbol and Description	VSX-D811S/KUXJI	VSX-D811S/KCXJI
	6	Operating Instructions (French)	Not used	XRC3057

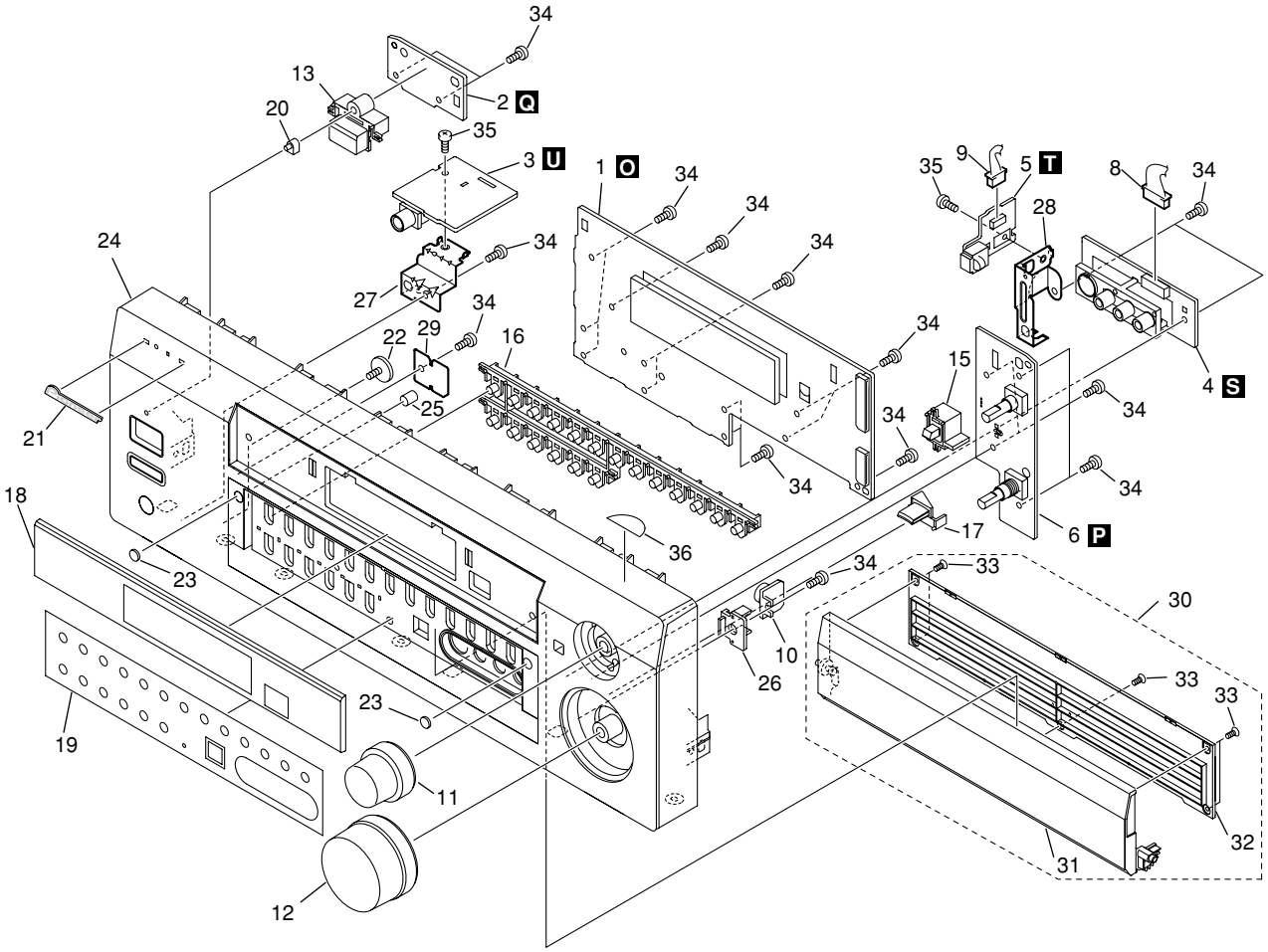
2.2 EXTERIOR SECTION



EXTERIOR SECTION partsList

Mark	No.	Description	Part No.
	1	D.D & INPUT ASSY	XWX3049
	2	AMP & PRIMARY ASSY	XWZ3539
	3	REGULATOR ASSY	XWZ3546
	4	AMP INPUT ASSY	XWZ3551
	5	TRANS2 ASSY	XWZ3559
	6	HASHIGETA ASSY	XWZ3568
	7	BOARD TO BOARD ASSY	XWZ3576
	8	6CH IN ASSY	XWZ3508
	9	DIGITAL IN ASSY	XWZ3519
	10	S. VIDEO ASSY	XWZ3522
	11	COMPORNENT ASSY	XWZ3524
	12	TRANS4 ASSY	XWZ3526
	13	KAWA ASSY	XWZ3529
	14	PRE-OUT ASSY	XWZ3530
	15	VIDEO ASSY	XWZ3583
	16	TRANS1 ASSY	XWZ3554
	17	TRANS3 ASSY	XWZ3562
	18	FM/AM TUNER MODULE	AXQ7231
	19	• • • • •	
⚠	20	Power Transformer (T1)	XTS3059
⚠	21	FU1 (10A)	REK1087
⚠	22	FU701 (10A)	REK1087
⚠	23	AC Power Cord	ADG7024
	24	Cord Stopper	CM-22C
	25	28P F•F•C/30V (J31) DD & INPUT CN102 - FRONT CN402	XDD3097
	26	17P F•F•C/30V (J32) KAWA CN5001 - FRONT CN401	XDD3098
	27	7P F•F•C/30V (J33) KAWA CN5004 - VIDEO CN503	XDD3099
	28	13P F•F•C/30V (J34) KAWA CN5005 - FM/AM TUNER MODULE CN201	XDD3100
	29	19P F•F•C/30V (J35) DD & INPUT CN106 - AMP INPUT CN254	XDD3101
	30	23P F•F•C/30V (J36) AMP & PRIMARY CN53 - REGULATOR CN801	XDD3102
	31	7P F•F•C/30V (J37) DD & INPUT CN9101 - DIGITAL IN CN1901	XDD3103
	32	5P F•F•C/30V (J38) BOARD TO B CN392 - COMPORNENT CN5501	XDD3104
	33	7P F•F•C/30V (J46) AMP & PRIMARY CN604 - PRE-OUT CN1575	XDD3105
	34	9P F•F•C/30V (J48) DD & INPUT CN104 - 6CH IN CN307	XDD3106
	35	3P F•F•C/30V (J22) AMP INPUT CN251 - TRANS4 CN891	XDD3107
⚠	36	Fan Motor	XXM3002
	37	Under Base 409	ANA7094
	38	Insulator	PNW2766
	39	FFC Cover R5	XMR3047
	40	Rear Panel	XNC3141
	41	Bonnet D510	XZN3112
	42	Fan Holder R4	XNG3040
	43	Tuner Shield R5	XNG3072
	44	PCB Angle R5	XNG3073
	45	Reg Support R5	XNG3074
	46	Heat Sink Assy 0.4*40	XNH3020
	47	Heat Sink Angle F	ANG7251
	48	Heat Sink Angle R	ANG7252
	49	Heat Sink	XNH3019
	50	Screw 3x23	ABA7043
	51	PCB Mold	AMR2533
	52	• • • • •	
	53	Screw	BBZ30P080FMC
	54	Screw	BBZ30P200FMC
	55	Screw	FBT40P080FZK
	56	• • • • •	
	57	Binder ASSY	XWZ3571
NSP	58	Holder ASSY	XWZ3574

2.3 FRONT PANEL SECTION



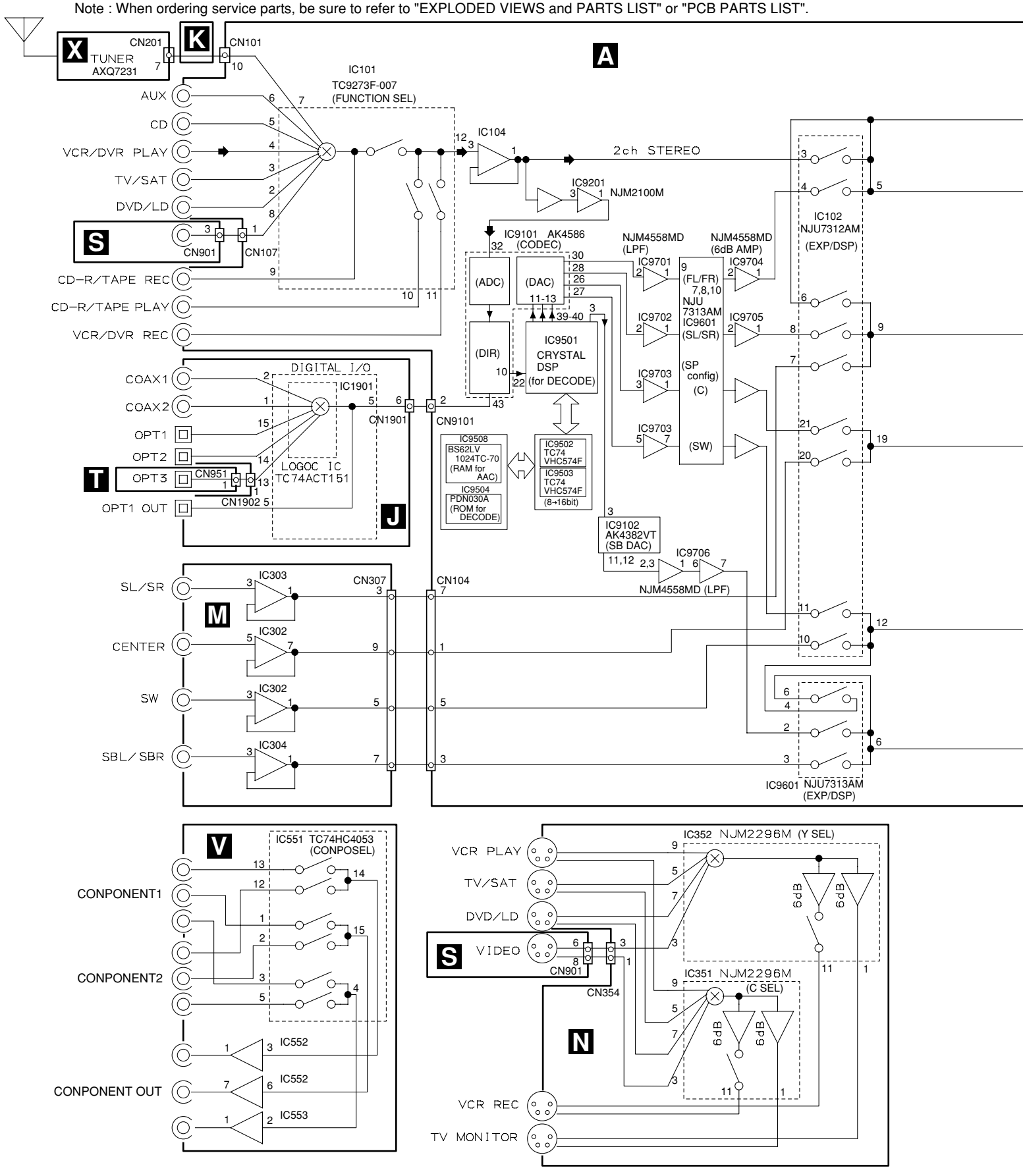
FRONT PANEL SECTION partsList

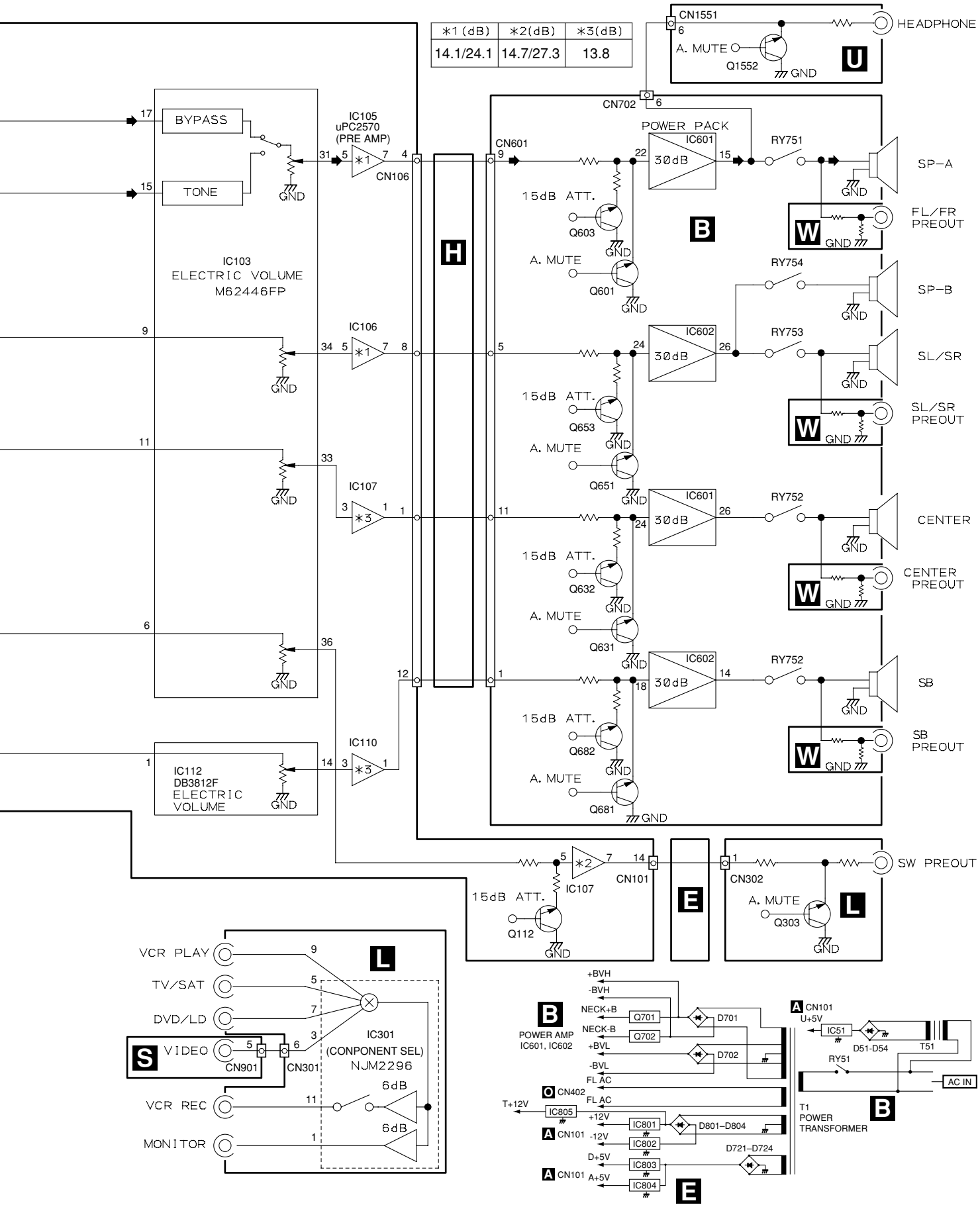
Mark	No.	Description	Part No.
	1	FRONT ASSY	XWZ3501
	2	POWER SW ASSY	XWZ3510
	3	H.P. ASSY	XWZ3513
	4	FRONT VIDEO ASSY	XWZ3515
	5	FRONT OPTICAL ASSY	XWZ3516
	6	R. ENCODER ASSY	XWZ3582
	7	• • • • •	
	8	8P Shielded Cable (J29)	XDX3012
	9	6P Shielded Cable (J30)	XDX3018
	10	Damper Assy	AXA7052
	11	Select Knob R5BH	XAB3023
	12	Volume Knob R5BH	XAB3025
	13	Power Button R5B	XAD3123
	14	• • • • •	
	15	Jog Button R5B	XAD3124
	16	Door Button R5B	XAD3126
	17	B Lens R4	XAK3181
	18	D Panel R5 W	XAK3274
	19	BN Cover 811B UL	XAK3294
	20	Led Lens 1.6	XAK3308
	21	Pioneer Badge B	XAM3006
	22	Screw DR 3x8W	XBA3010
	23	Cushion R4B	XED3001
	24	Front Panel	XMB3063
	25	Magnet R5	XMF3002
	26	Holder L R5	XMR3046
	27	Earth Plate R5 HP	XNG3066
	28	Earth Plate R5 D	XNG3067
	29	Magnet Cover R5	XNG3075
	30	Door Assy R5B	XXG3091
	31	Door R5B	XAK3275
	32	Door Cover R5B	XAK3276
	33	Screw 2x35 B	XBA3007
	34	Screw	PPZ30P080FMC
	35	Screw	BBZ30P080FMC
NSP	36	Energy Star Label	AAX7876

3. BLOCK DIAGRAM AND SCHEMATIC DIAGRAM

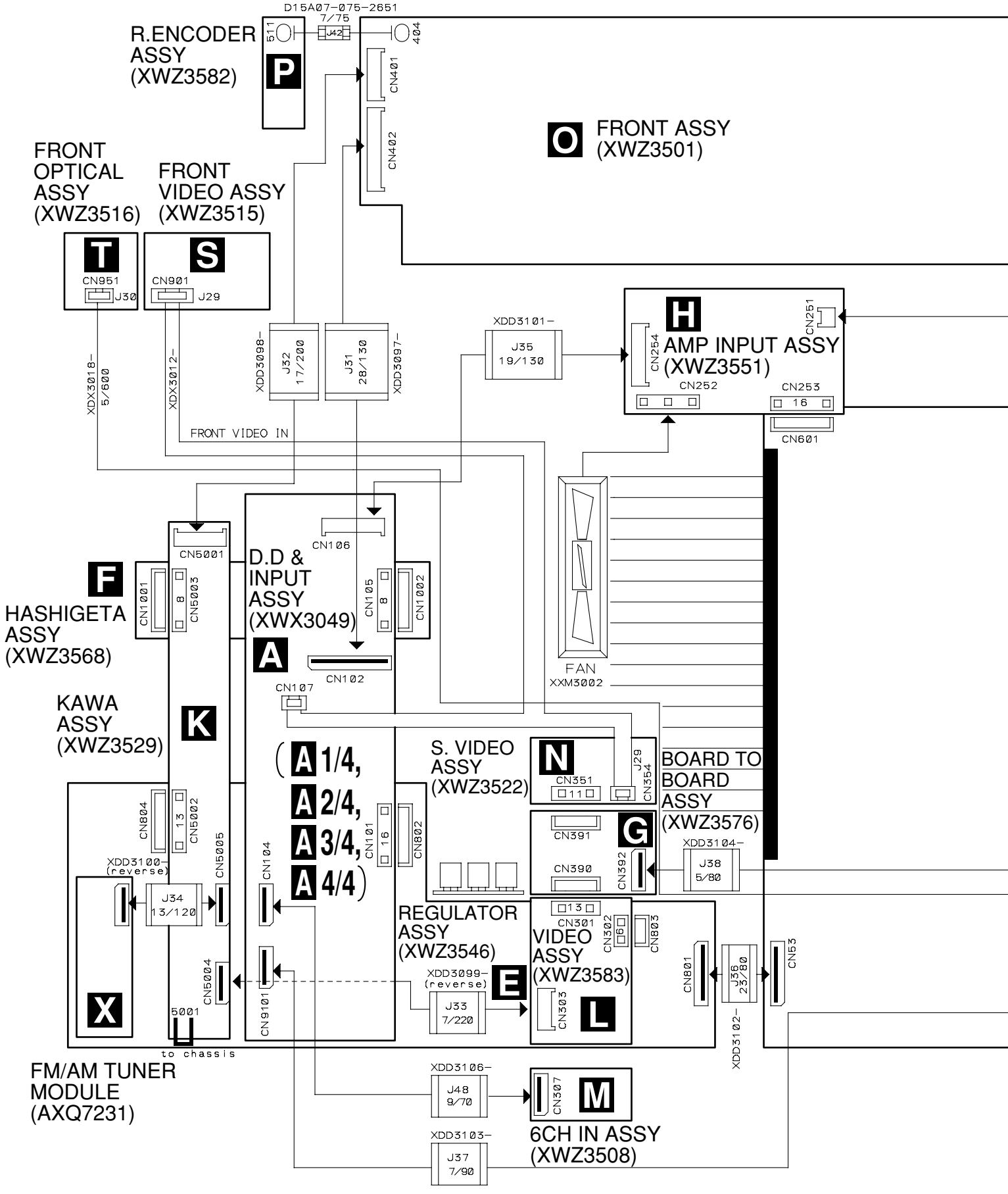
3.1 BLOCK DIAGRAM

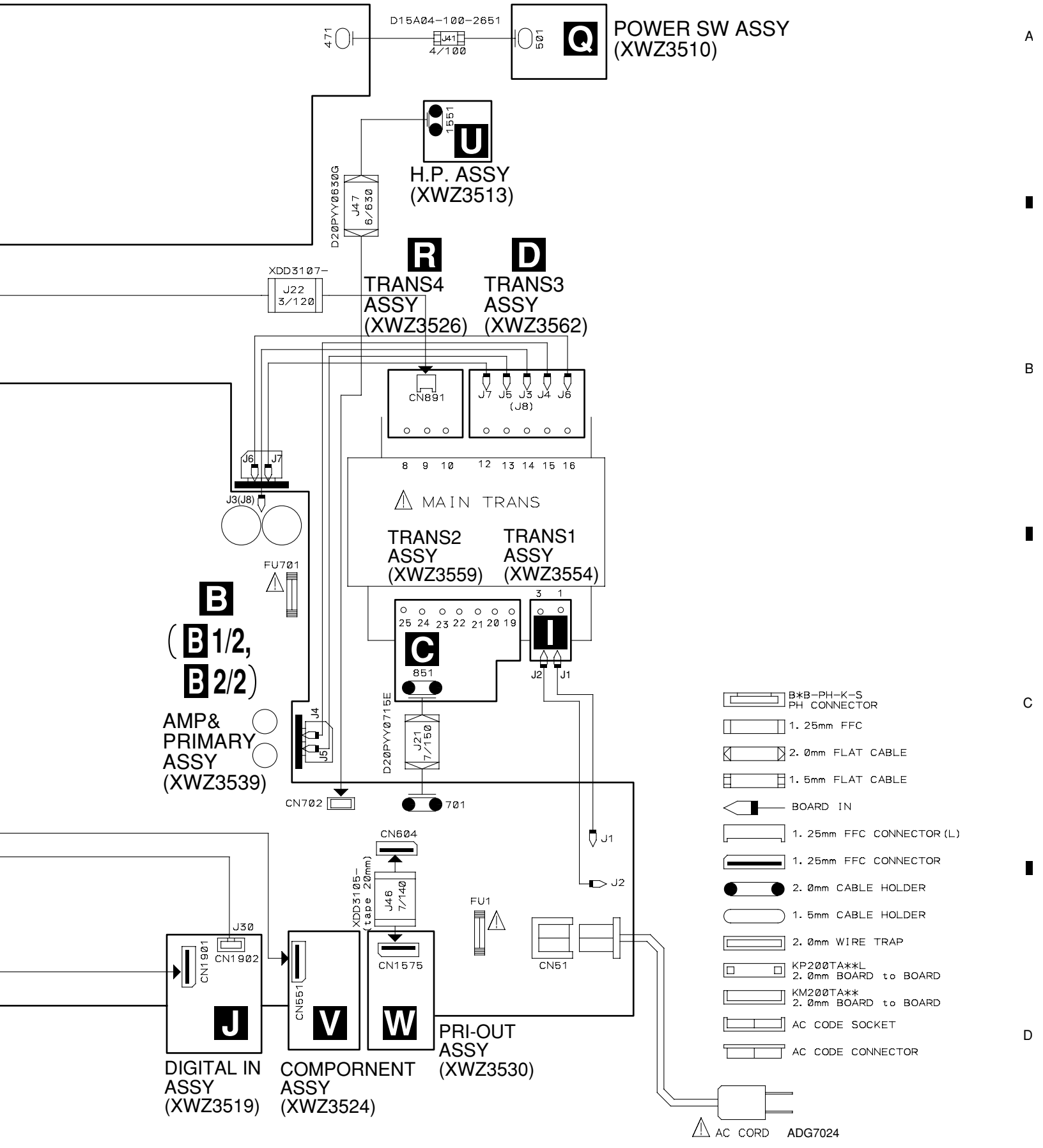
Note : When ordering service parts, be sure to refer to "EXPLODED VIEWS and PARTS LIST" or "PCB PARTS LIST".



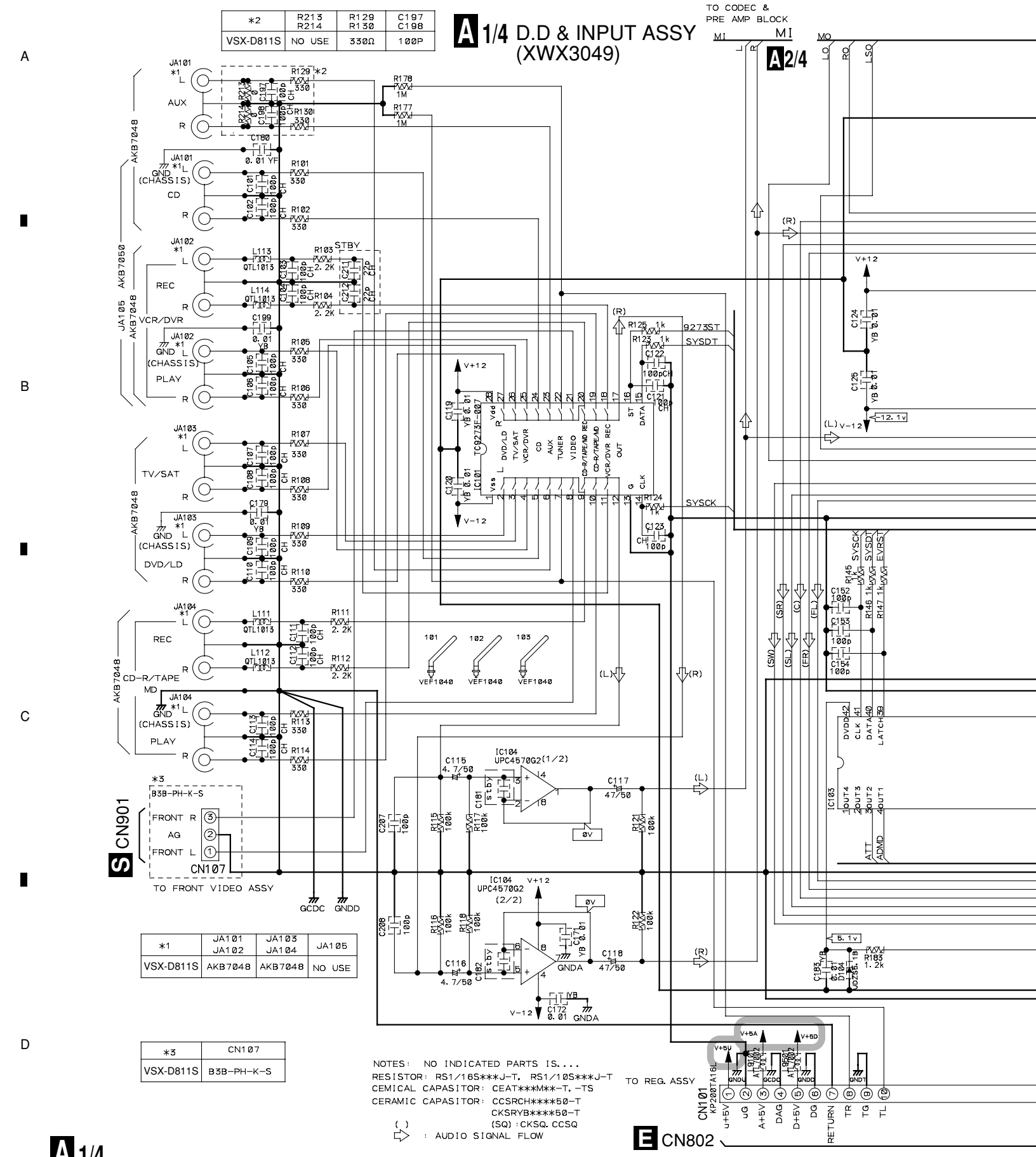

∗1 (dB) ∗2(dB) ∗3(dB)
14.1/24.1 14.7/27.3 13.8
CN1551
HEADPHONE
A. MUTE
Q1552
GND
U
CN702
POWER PACK
IC105
uPC2570
(PRE AMP)
CN106
CN601
IC601
30dB
RY751
SP-A
FL/FR
PREOUT
15dB ATT.
Q603
A. MUTE
Q601
BYPASS
TONE
IC103
ELECTRIC VOLUME
M62446FP
H
B
W
RY754
SP-B
IC106
IC602
RY753
SL/SR
SL/SR
PREOUT
Q653
Q651
IC107
IC601
RY752
CENTER
CENTER
PREOUT
Q632
Q631
IC602
RY752
SB
SB
PREOUT
Q682
Q681
IC110
IC112
DB3812F
ELECTRIC
VOLUME
CN101
IC107
Q112
E
CN302
SW PREOUT
Q303
L
VCR PLAY
TV/SAT
DVD/LD
S VIDEO
CN901
CN301
IC301
(CONPONENT SEL)
NJM2296
6dB
VCR REC
MONITOR
+BVH
-BVH
NECK+B
NECK-B
+BVL
-BVL
FL AC
Q701
Q702
D701
D702
POWER AMP
IC601, IC602
O CN402
T+12V
IC805
+12V
-12V
D+5V
A+5V
IC801
IC802
IC803
IC804
D801–D804
D721–D724
A CN101
U+5V
IC51
D51-D54
T51
RY51
AC IN
T1
POWER
TRANSFORMER

3.2 OVERALL WIRING CONNECTION DIAGRAM




D15A04-100-2651
J41
4/100
471
501
Q
POWER SW ASSY
(XWZ3510)
1551
U
H.P. ASSY
(XWZ3513)
D20PYY0630G
J47
6/630
XDD3107-
J22
3/120
R
TRANS4
ASSY
(XWZ3526)
D
TRANS3
ASSY
(XWZ3562)
CN891
J7 J5 J3 J4 J6
(J8)
J6 J7
J3(J8)
8 9 10 12 13 14 15 16
MAIN TRANS
TRANS2
ASSY
(XWZ3559)
TRANS1
ASSY
(XWZ3554)
FU701
B
(B 1/2,
B 2/2)
AMP&
PRIMARY
ASSY
(XWZ3539)
25 24 23 22 21 20 19
C
851
3 1
I
J2 J1
J4
J5
D20PYY0715E
J21
7/150
CN702
701
CN604
XDD3105-
(tape 20mm)
J46
7/140
J1
J2
FU1
CN51
J30
CN1901
CN1902
CN551
CN1575
J
V
W
DIGITAL IN
ASSY
(XWZ3519)
COMPORNENT
ASSY
(XWZ3524)
PRI-OUT
ASSY
(XWZ3530)
AC CORD
ADG7024
B*B-PH-K-S
PH CONNECTOR
1. 25mm FFC
2. 0mm FLAT CABLE
1. 5mm FLAT CABLE
BOARD IN
1. 25mm FFC CONNECTOR (L)
1. 25mm FFC CONNECTOR
2. 0mm CABLE HOLDER
1. 5mm CABLE HOLDER
2. 0mm WIRE TRAP
KP200TA**L
2. 0mm BOARD to BOARD
KM200TA**
2. 0mm BOARD to BOARD
AC CODE SOCKET
AC CODE CONNECTOR

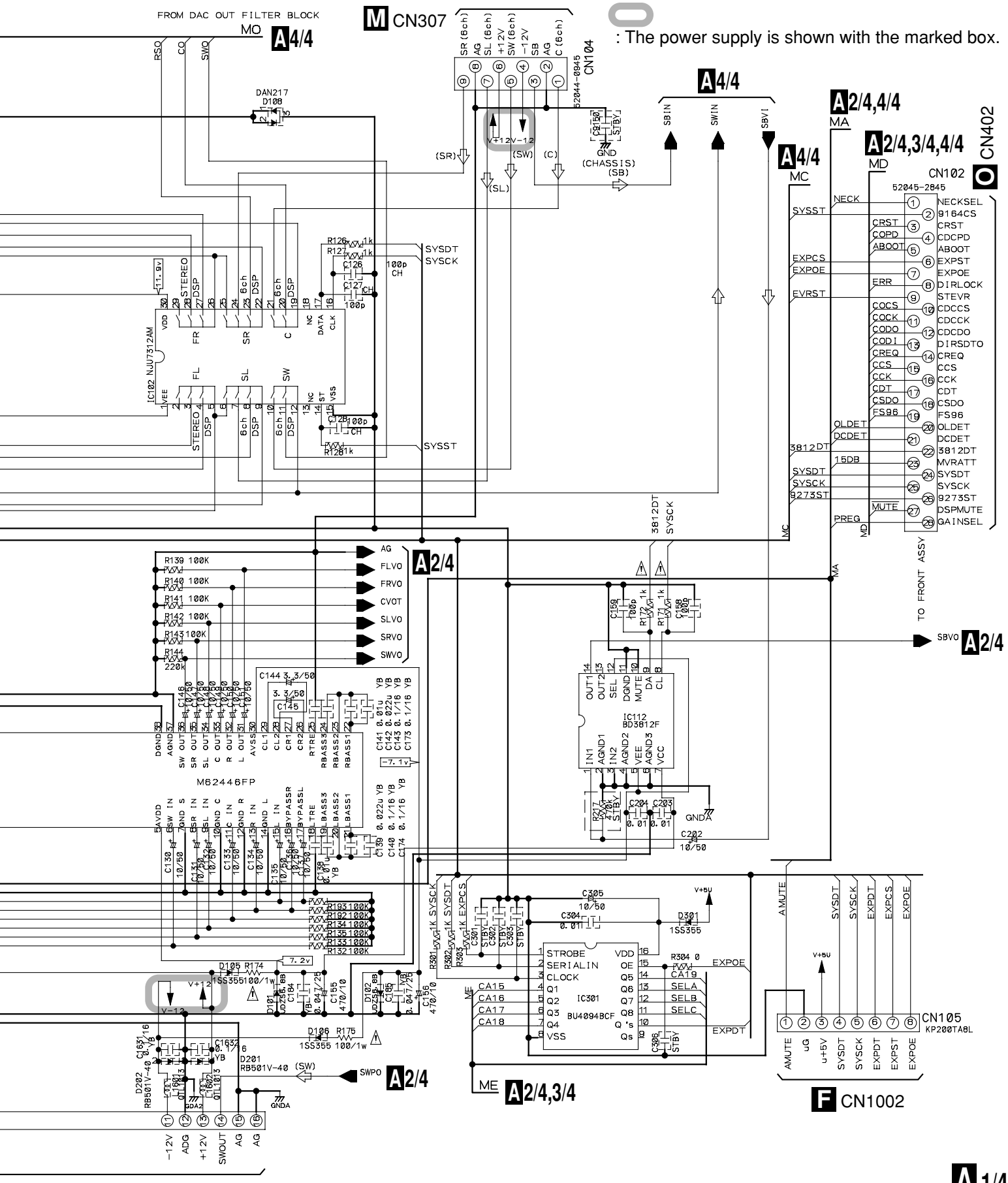
3.3 D.D & INPUT (1/4) ASSY



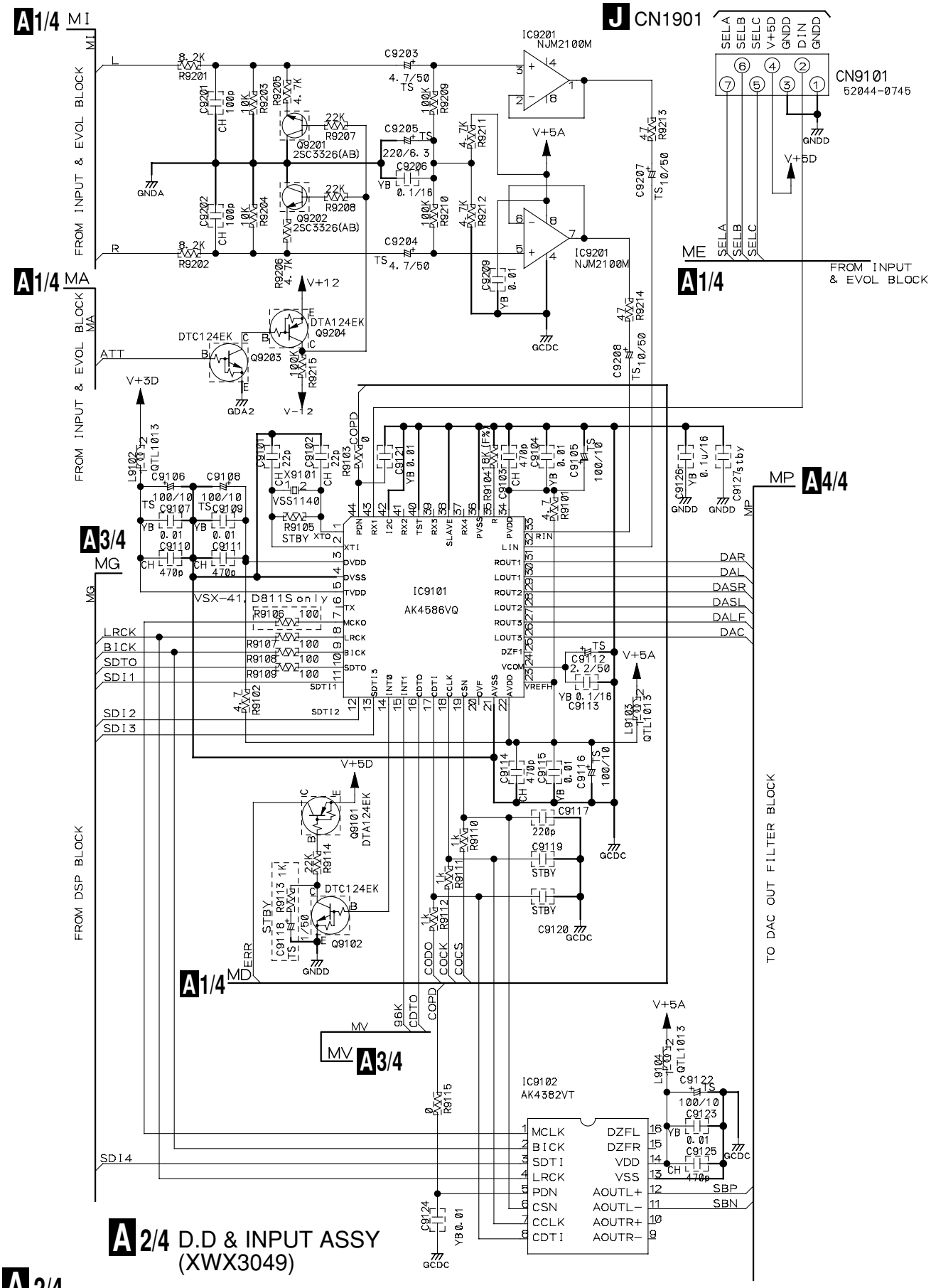
*2	R213 R214	R129 R130	C197 C198
VSX-D811S	NO USE	330Ω	100P

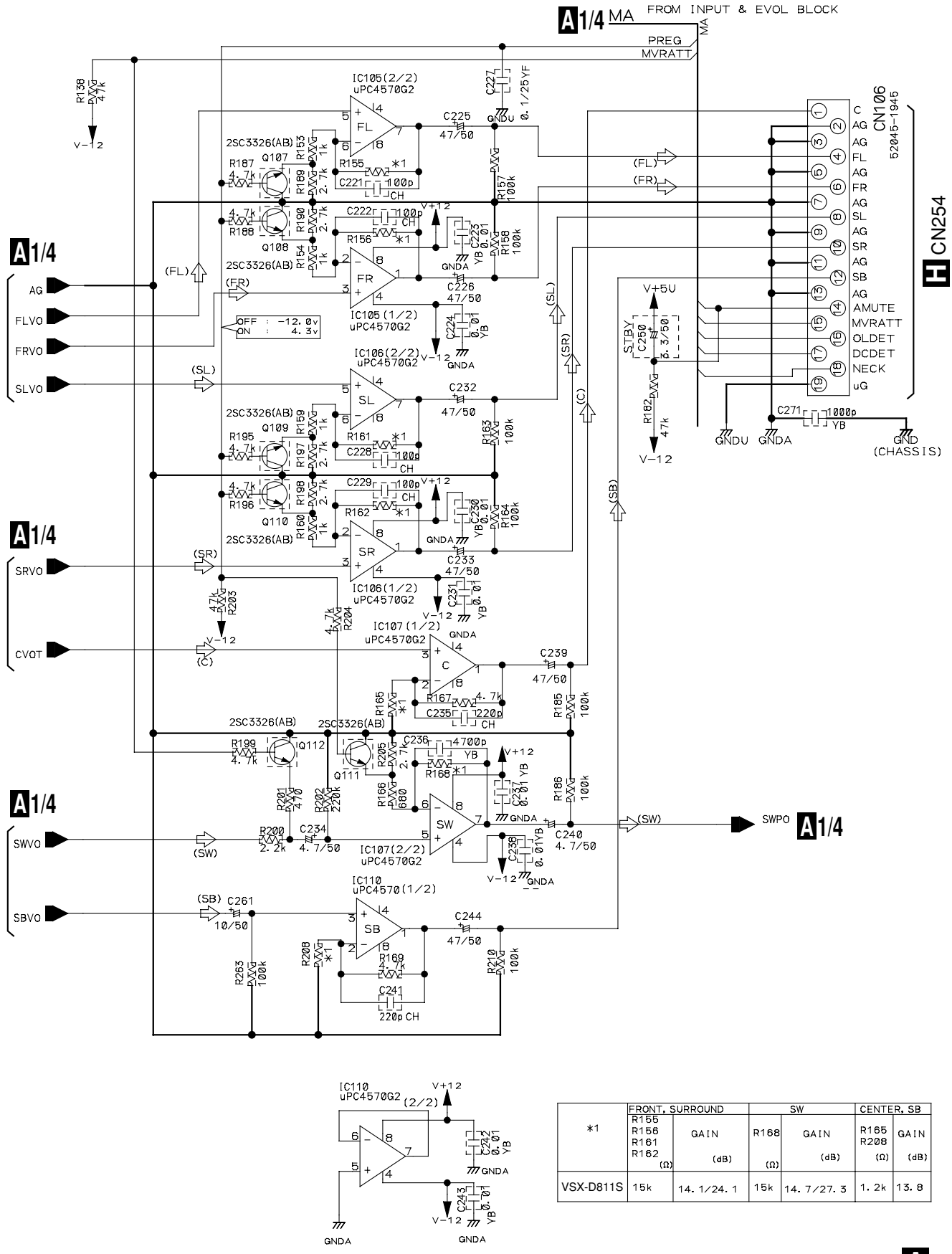
*1	JA101 JA102	JA103 JA104	JA105
VSX-D811S	AKB7048	AKB7048	NO USE

*3	CN107
VSX-D811S	B3B-PH-K-S


FROM DAC OUT FILTER BLOCK
MO
A4/4
M CN307
CN104
52044-0945
SR (6ch)
AG
SL (6ch)
+12V
SW (6ch)
−12V
SB
AG
C (6ch)
: The power supply is shown with the marked box.
A4/4
A2/4,4/4
MA
A2/4,3/4,4/4
MD
CN402
O
CN102
52045-2845
A4/4
MC
SBIN
SWIN
SBVI
V+12
V−12
GND
(CHASSIS)
(SB)
(SR)
(SW)
(C)
(SL)
DAN217
D108
IC102 NJU7312AM
SYSDT
SYSCK
SYSST
3812DT
SYSCK
A2/4
AG
FLVO
FRVO
CVOT
SLVO
SRVO
SWVO
M62446FP
IC112
BD3812F
SBVO
A2/4
TO FRONT ASSY
IC301
BU4094BCF
STROBE
SERIALIN
CLOCK
CA15
CA16
CA17
CA18
EXPOE
EXPDT
CN105
KP200TA8L
AMUTE
uG
u+5V
SYSDT
SYSCK
EXPDT
EXPST
EXPOE
F CN1002
D201
RB501V-40
SWPO
A2/4
ME
A2/4,3/4
A1/4

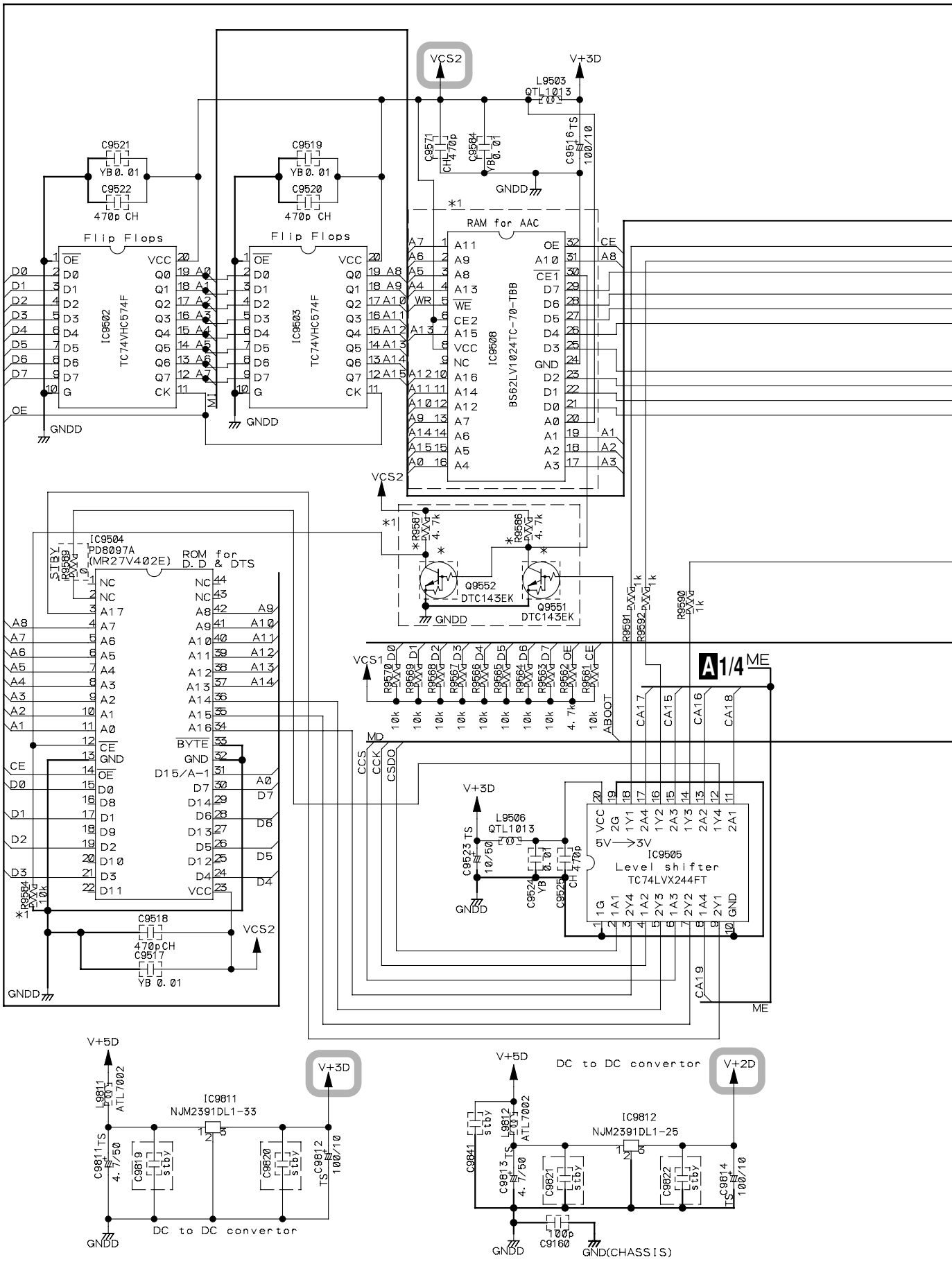
3.4 D.D & INPUT (2/4) ASSY





*1	FRONT, SURROUND		SW		CENTER, SB	
	R155 R156 R161 R162 (Ω)	GAIN (dB)	R168 (Ω)	GAIN (dB)	R165 R208 (Ω)	GAIN (dB)
VSX-D811S	15k	14.1/24.1	15k	14.7/27.3	1.2k	13.8

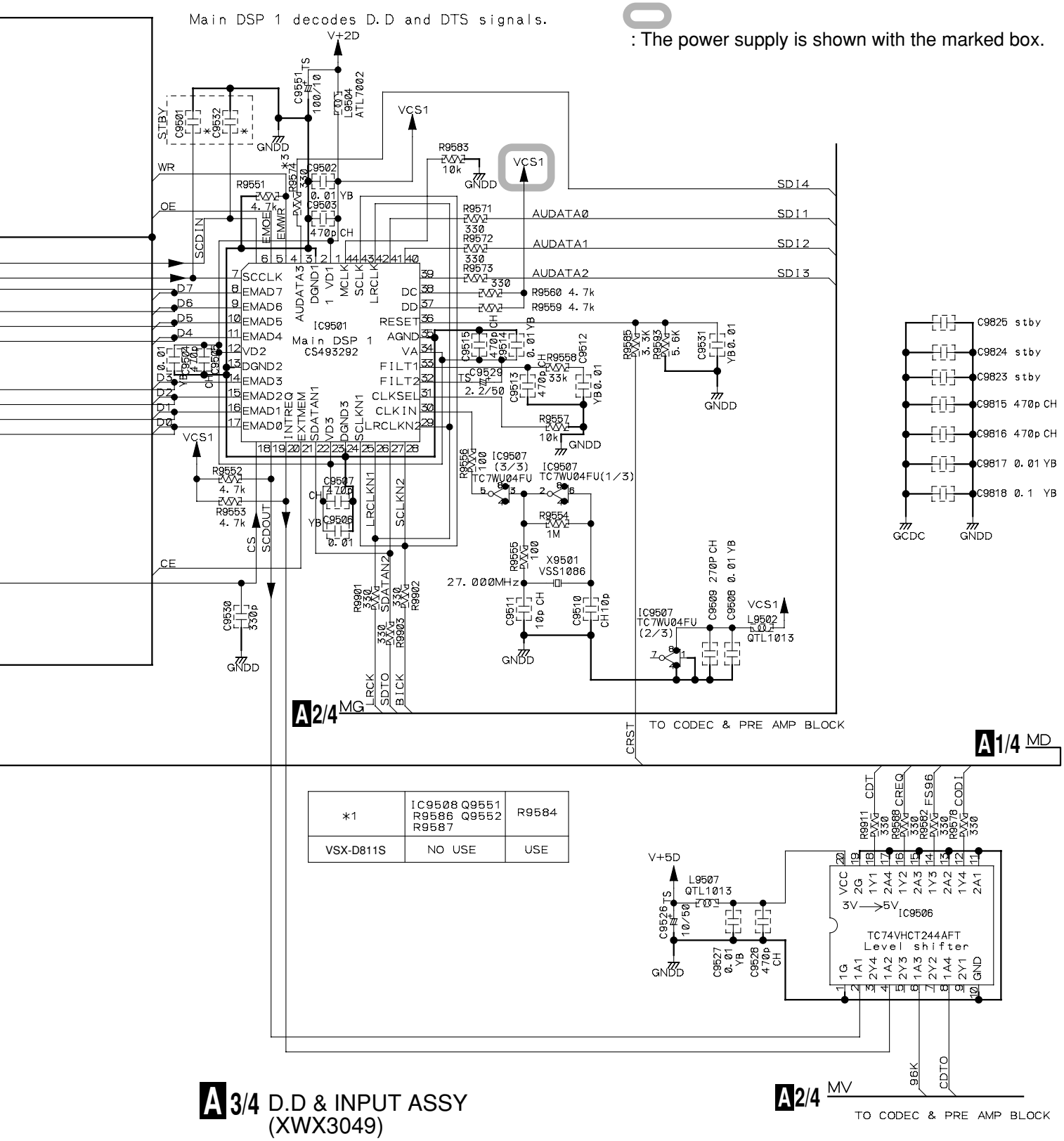
3.5 D.D & INPUT (3/4) ASSY



A 3/4

Main DSP 1 decodes D.D and DTS signals.

: The power supply is shown with the marked box.

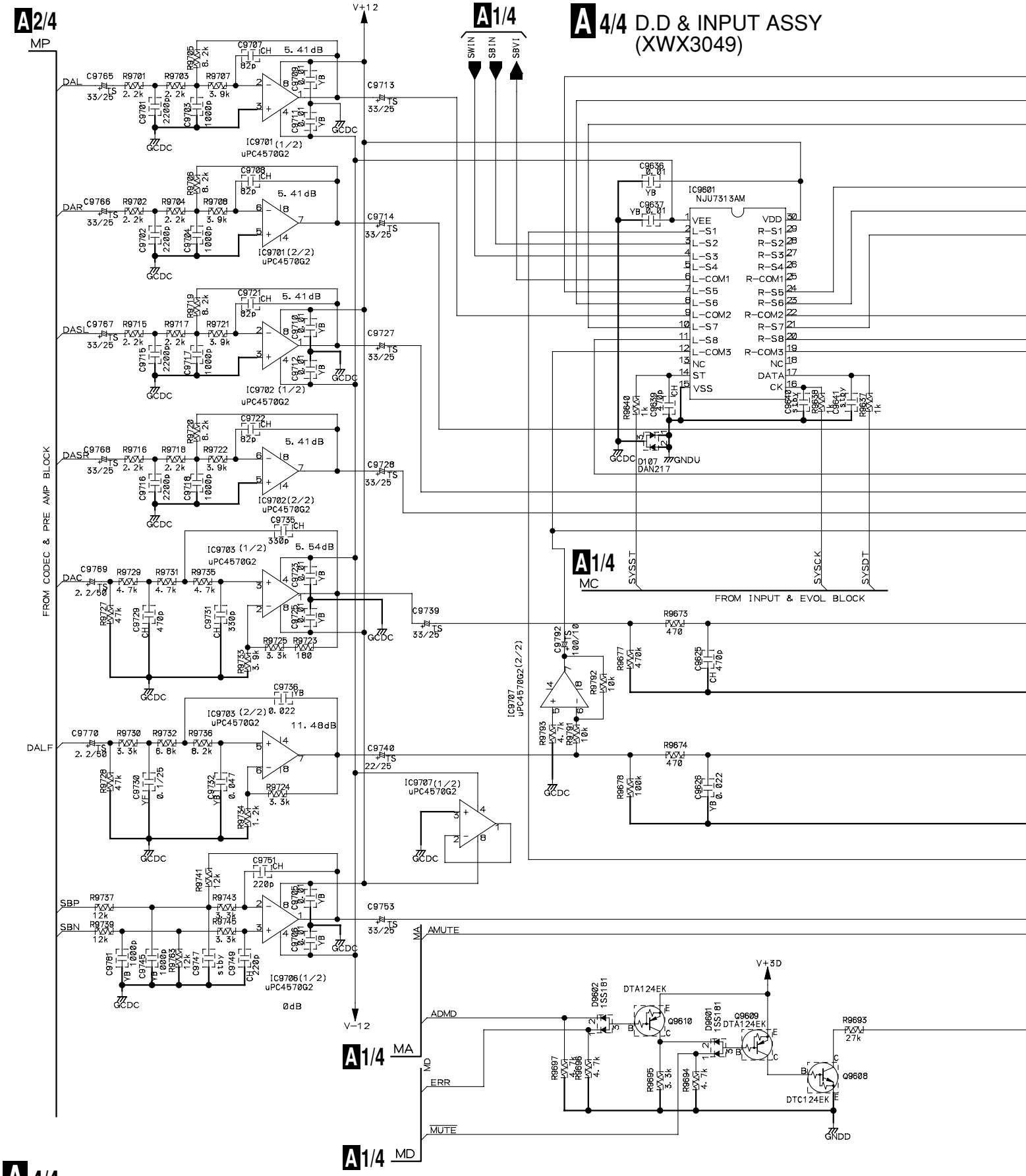


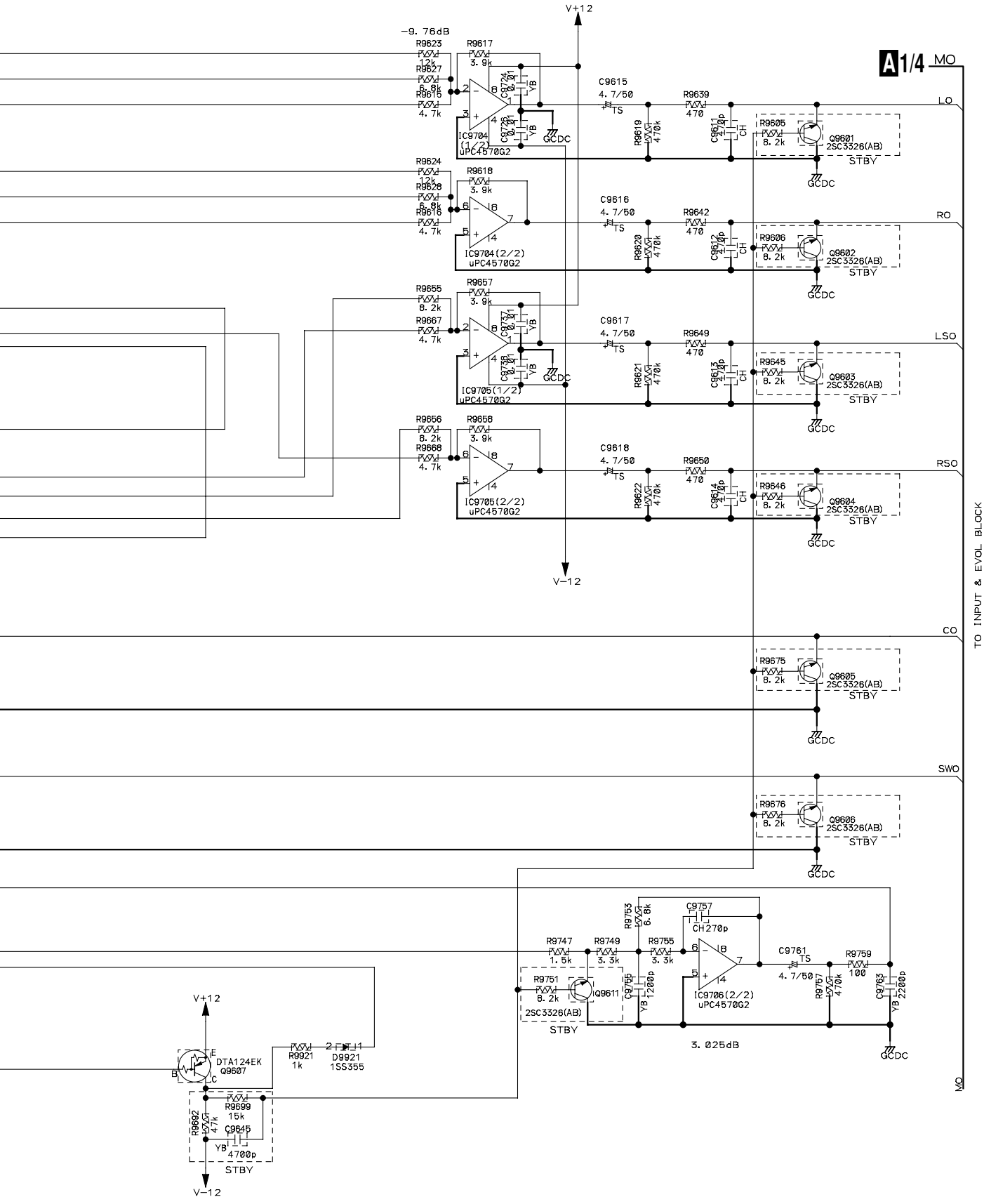
*1	IC9508 Q9551 R9586 Q9552 R9587	R9584
VSX-D811S	NO USE	USE

A3/4 D.D & INPUT ASSY (XWX3049)

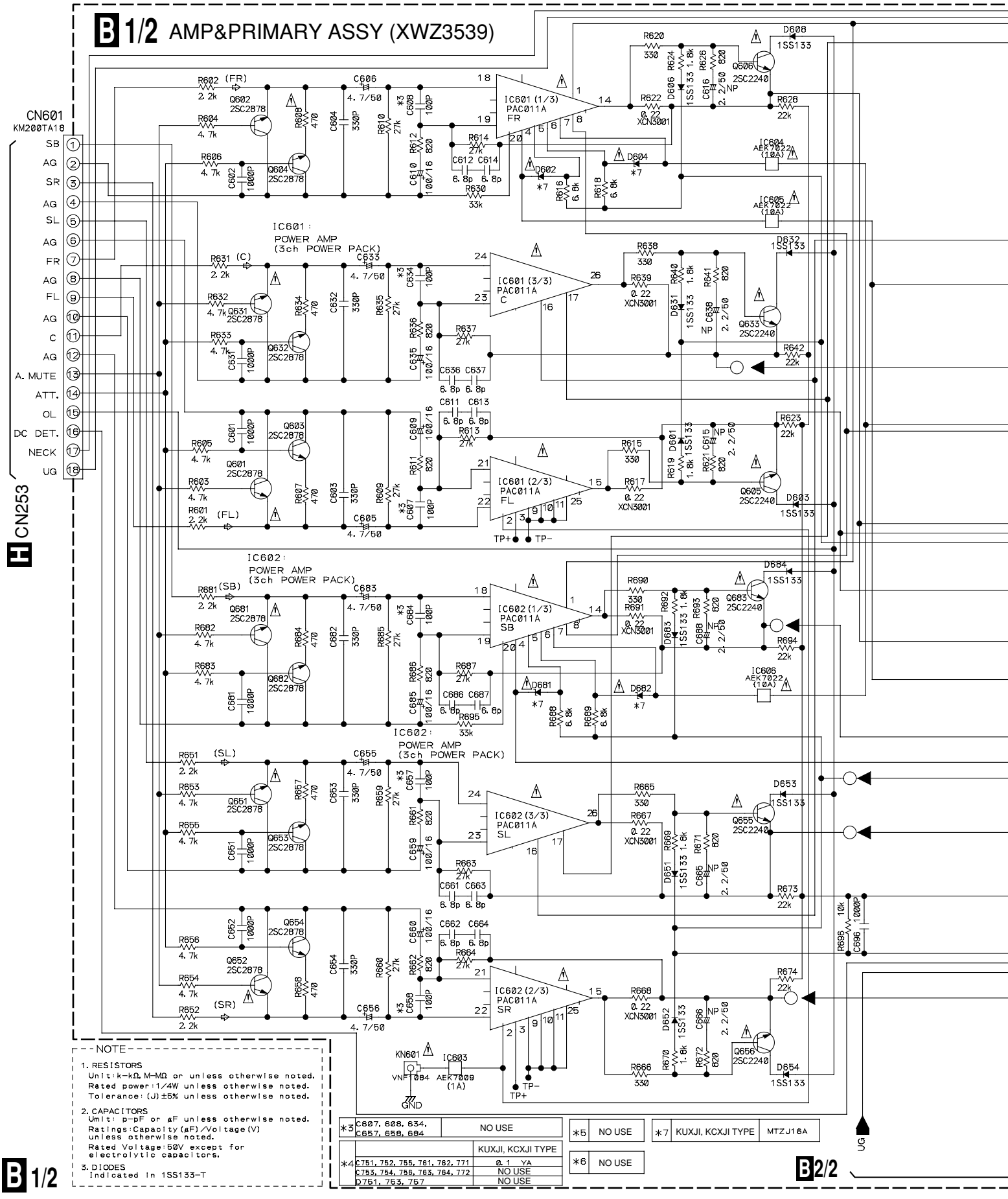
*3	R9574
VSX-D811S	USE

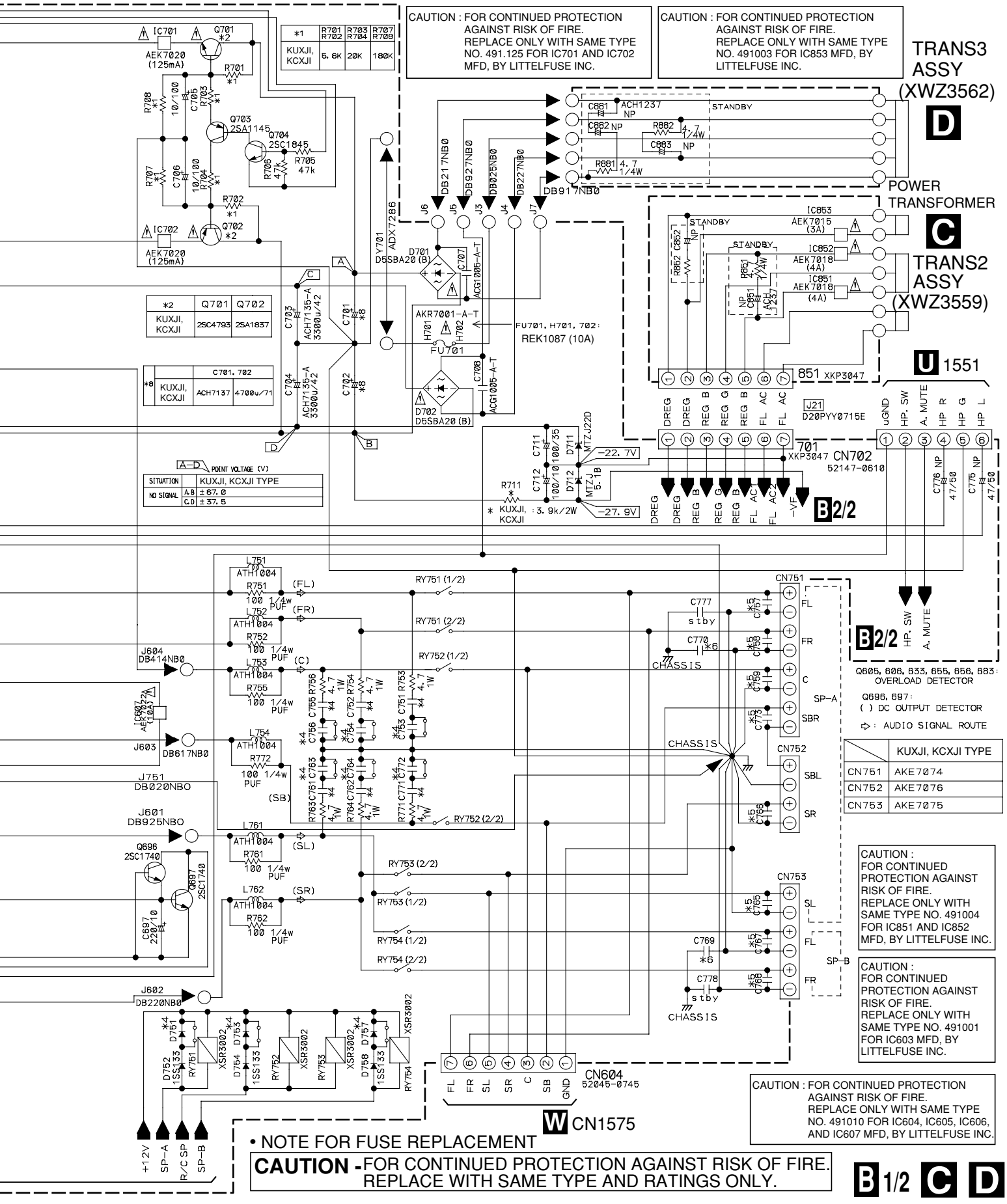
3.6 D.D & INPUT (4/4) ASSY



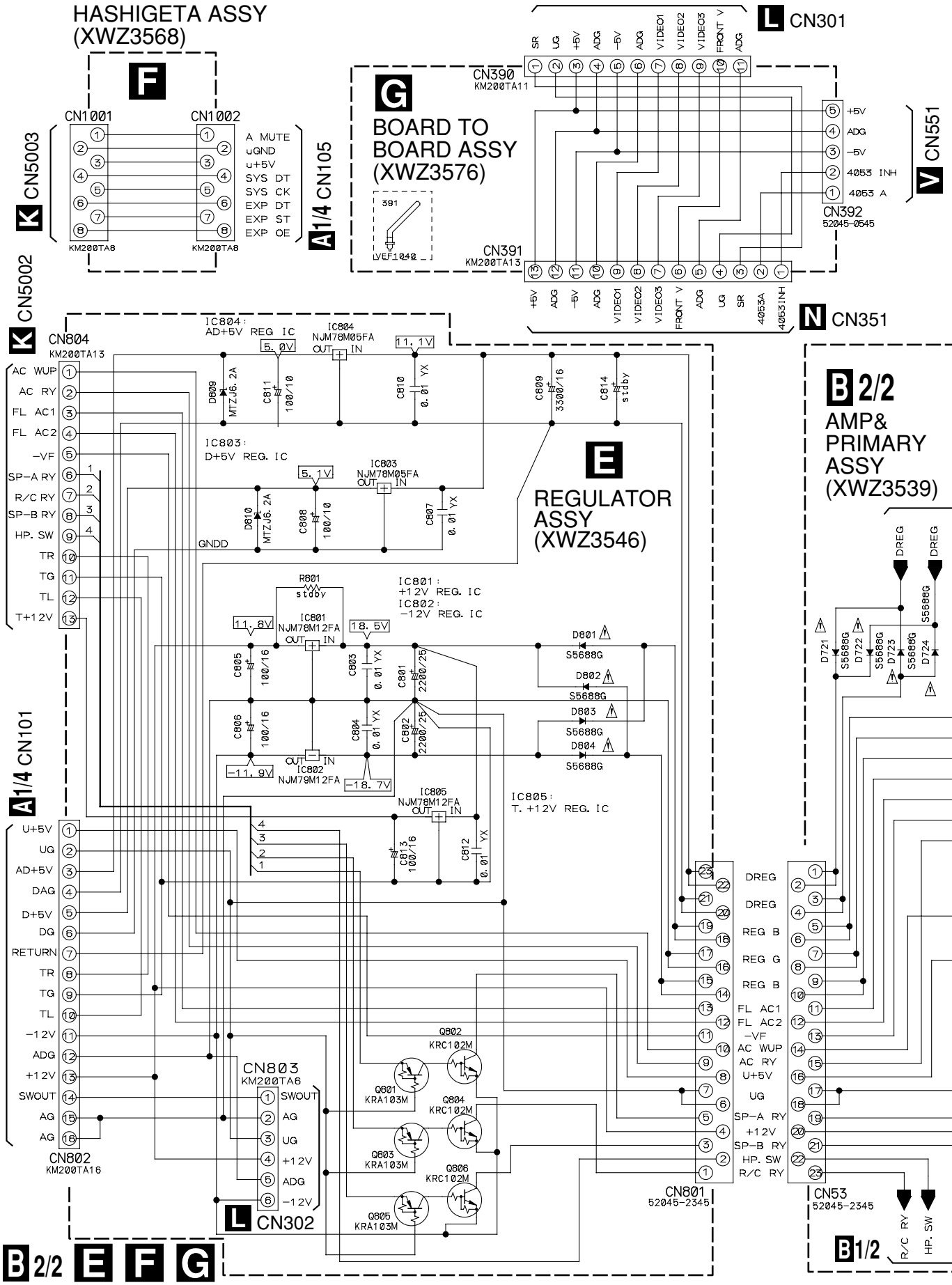

A1/4 MO
V+12
V-12
-9.76dB
R9623 12k
R9627 8.2k
R9615 4.7k
R9617 3.9k
C9724 CH 470p
C9725 YB 4700p
IC9704 (1/2) uPC4570G2
GCDC
C9615 4.7/50 TS
R9639 470
R9619 470k
C9611 470p CH
R9605 8.2k
Q9601 2SC3326(AB)
STBY
LO
R9624 12k
R9628 8.2k
R9616 4.7k
R9618 3.9k
IC9704(2/2) uPC4570G2
C9616 4.7/50 TS
R9642 470
R9620 470k
C9612 470p CH
R9606 8.2k
Q9602 2SC3326(AB)
RO
R9655 8.2k
R9667 4.7k
R9657 3.9k
C9731 CH 470p
C9732 YB 4700p
IC9705(1/2) uPC4570G2
C9617 4.7/50 TS
R9649 470
R9621 470k
C9613 470p CH
R9645 8.2k
Q9603 2SC3326(AB)
LSO
R9656 8.2k
R9668 4.7k
R9658 3.9k
IC9705(2/2) uPC4570G2
C9618 4.7/50 TS
R9650 470
R9622 470k
C9614 470p CH
R9646 8.2k
Q9604 2SC3326(AB)
RSO
CO
R9675 8.2k
Q9605 2SC3326(AB)
SWO
R9676 8.2k
Q9606 2SC3326(AB)
R9747 1.5k
R9749 3.3k
R9755 3.3k
R9753 6.8k
C9757 CH 270p
R9751 8.2k
Q9611 2SC3326(AB)
C9755 YB 1200p
IC9706(2/2) uPC4570G2
C9761 TS 4.7/50
R9757 470k
R9759 100
C9763 YB 2200p
3.025dB
DTA124EK Q9607
R9921 1k
D9921 1SS355
R9692 47k
R9699 15k
C9645 YB 4700p
TO INPUT & EVOL BLOCK
MO

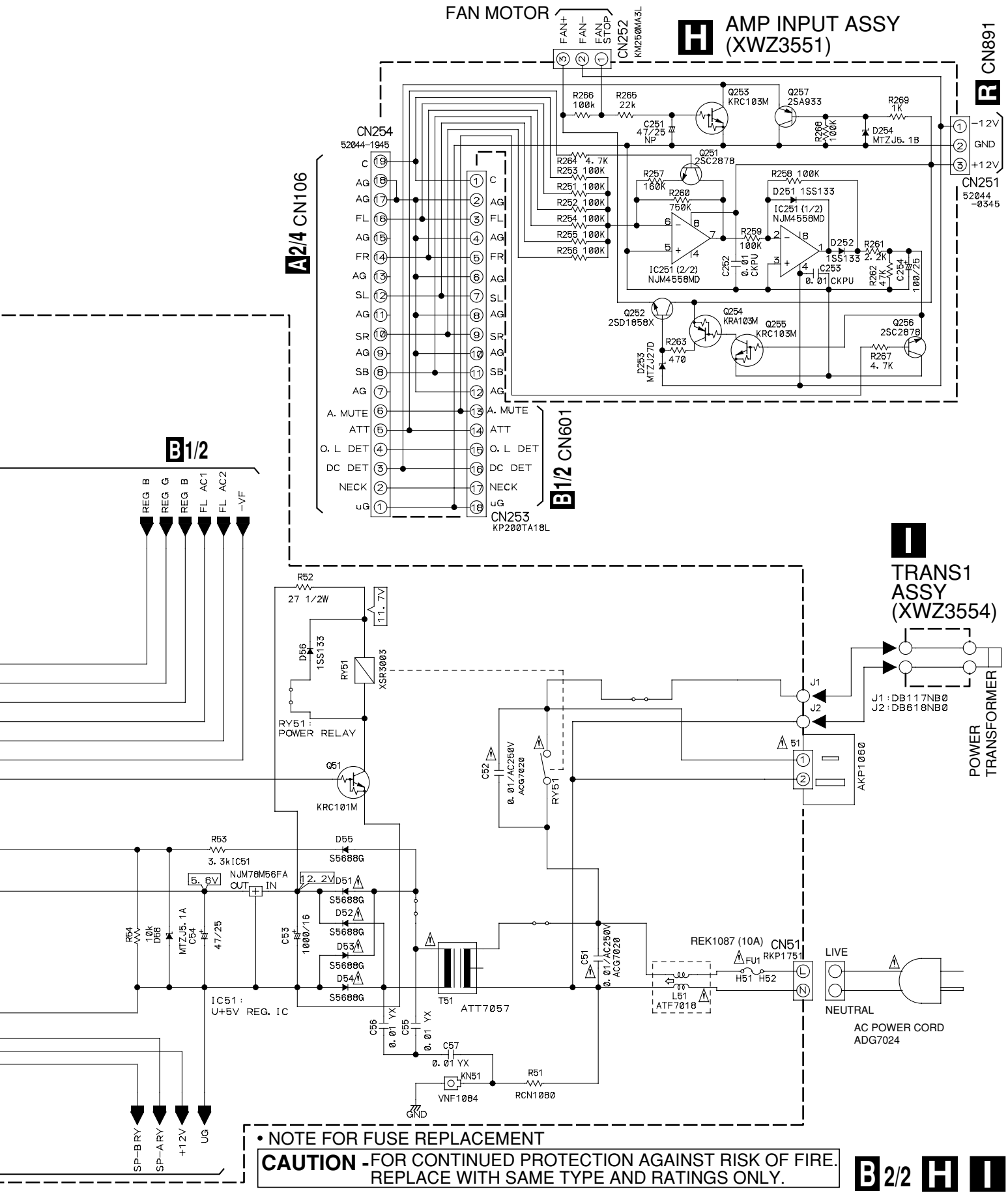
3.7 AMP & PRIMARY (1/2), TRANS2 and TRANS3 ASSYS




CAUTION : FOR CONTINUED PROTECTION AGAINST RISK OF FIRE. REPLACE ONLY WITH SAME TYPE NO. 491.125 FOR IC701 AND IC702 MFD, BY LITTELFUSE INC.
CAUTION : FOR CONTINUED PROTECTION AGAINST RISK OF FIRE. REPLACE ONLY WITH SAME TYPE NO. 491003 FOR IC853 MFD, BY LITTELFUSE INC.
TRANS3 ASSY (XWZ3562)
POWER TRANSFORMER
TRANS2 ASSY (XWZ3559)
IC701 AEK7020 (125mA)
IC702 AEK7020 (125mA)
IC853 AEK7015 (3A)
IC852 AEK7018 (4A)
IC851 AEK7018 (4A)
FU701, H701, 702: REK1087 (10A)
851 XKP3047
701 XKP3047
CN702 52147-0610
CN604 52045-0745
CN751
CN752
CN753
CHASSIS
Q605, 606, 633, 655, 656, 685: OVERLOAD DETECTOR
Q696, 697: ( ) DC OUTPUT DETECTOR
: AUDIO SIGNAL ROUTE
KUXJI, KCXJI TYPE
CN751 AKE7074
CN752 AKE7076
CN753 AKE7075
CAUTION : FOR CONTINUED PROTECTION AGAINST RISK OF FIRE. REPLACE ONLY WITH SAME TYPE NO. 491004 FOR IC851 AND IC852 MFD, BY LITTELFUSE INC.
CAUTION : FOR CONTINUED PROTECTION AGAINST RISK OF FIRE. REPLACE ONLY WITH SAME TYPE NO. 491001 FOR IC603 MFD, BY LITTELFUSE INC.
CAUTION : FOR CONTINUED PROTECTION AGAINST RISK OF FIRE. REPLACE ONLY WITH SAME TYPE NO. 491010 FOR IC604, IC605, IC606, AND IC607 MFD, BY LITTELFUSE INC.
• NOTE FOR FUSE REPLACEMENT
CAUTION - FOR CONTINUED PROTECTION AGAINST RISK OF FIRE. REPLACE WITH SAME TYPE AND RATINGS ONLY.
B 1/2 C D
B 2/2
U 1551
W CN1575
+12V SP-A R/C SP SP-B

3.8 AMP & PRIMARY (2/2), REG. , HASHIGETA, B TO B and TRANS1 ASSYS



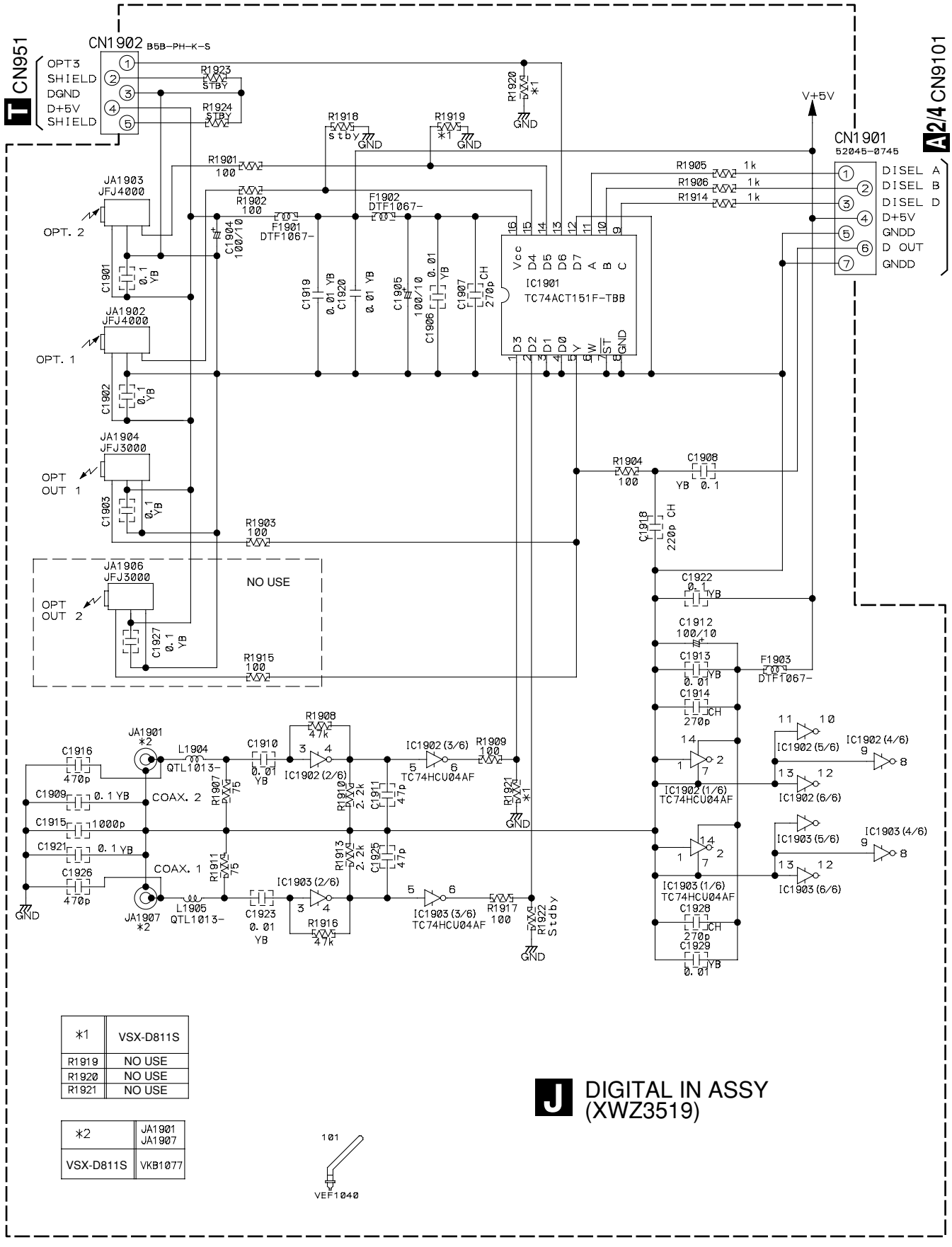


• NOTE FOR FUSE REPLACEMENT

CAUTION - FOR CONTINUED PROTECTION AGAINST RISK OF FIRE. REPLACE WITH SAME TYPE AND RATINGS ONLY.

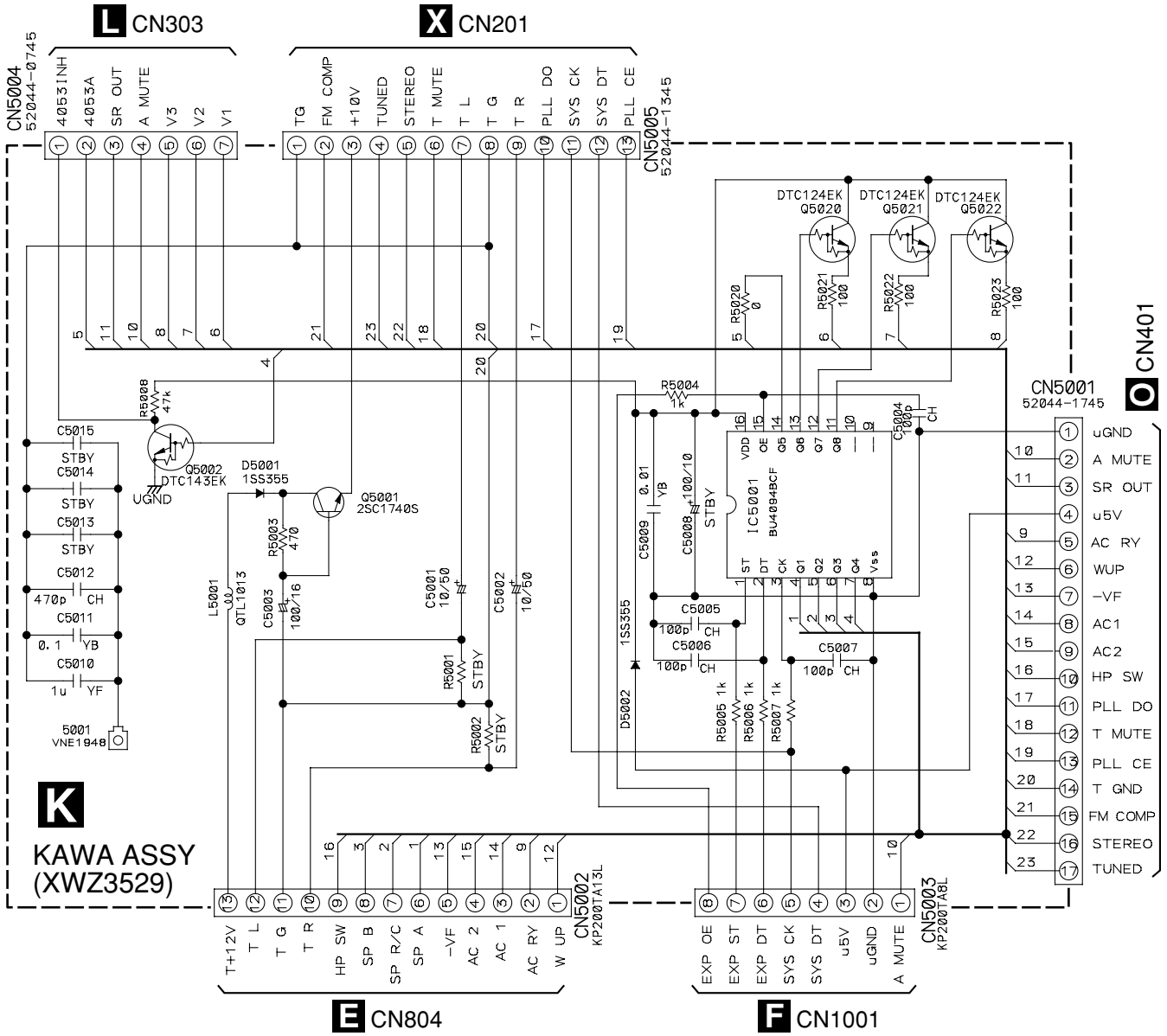
B 2/2 H I

3.9 DIGITAL IN and KAWA ASSYS

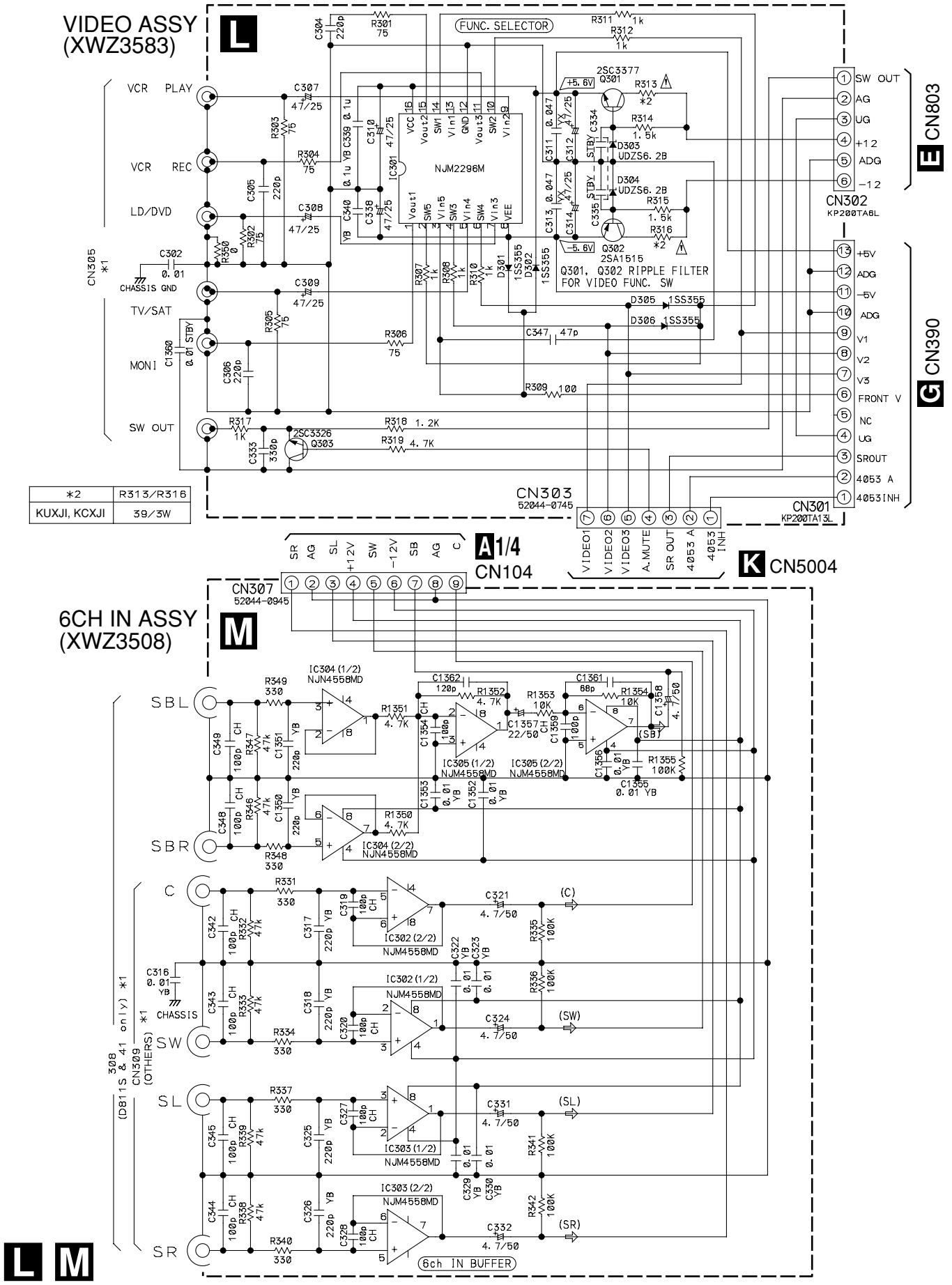


*1	VSX-D811S
R1919	NO USE
R1920	NO USE
R1921	NO USE

*2	JA1901 JA1907
VSX-D811S	VKB1077


L CN303
X CN201
CN5004
52044-0745
CN5005
52044-1345
4053INH
4053A
SR OUT
A MUTE
V3
V2
V1
TG
FM COMP
+10V
TUNED
STEREO
T MUTE
T L
T G
T R
PLL DO
SYS CK
SYS DT
PLL CE
DTC124EK Q5020
DTC124EK Q5021
DTC124EK Q5022
R5020 0
R5021 100
R5022 100
R5023 100
R5008 47k
Q5002 DTC143EK
UGND
D5001 1SS355
Q5001 2SC1740S
R5003 470
L5001 0.0 QTL1013
C5003 100/16
C5001 10/50
C5002 10/50
R5001 STBY
R5002 STBY
C5015 STBY
C5014 STBY
C5013 STBY
C5012 470p CH
C5011 0.1 YB
C5010 1u YF
5001 VNE1948
R5004 47k
C5009 0.01 YB
C5008 100/10 STBY
IC5001 BU4094BCF
C5004 220p CH
C5005 100p CH
C5006 100p CH
C5007 100p CH
1SS355
D5002
R5005 1k
R5006 1k
R5007 1k
CN5001
52044-1745
O CN401
uGND
A MUTE
SR OUT
u5V
AC RY
WUP
–VF
AC1
AC2
HP SW
PLL DO
T MUTE
PLL CE
T GND
FM COMP
STEREO
TUNED
K
KAWA ASSY
(XWZ3529)
CN5002
KP200TA13L
T+12V
T L
T G
T R
HP SW
SP B
SP R/C
SP A
–VF
AC 2
AC 1
AC RY
W UP
E CN804
CN5003
KP200TA8L
EXP OE
EXP ST
EXP DT
SYS CK
SYS DT
u5V
uGND
A MUTE
F CN1001

3.10 VIDEO, 6CH IN and S. VIDEO ASSYS



NOTE

1. RESISTORS
   Unit: k-kΩ, M-MΩ or Ω unless otherwise noted.
   Rated power: 1/10W unless otherwise noted.
   Tolerance: (J)±5% unless otherwise noted.
2. CAPACITORS
   Unit: p-pF or μF unless otherwise noted.
   Ratings: Capacity(μF)/Voltage(V) unless otherwise noted.
   Rated Voltage: 50V expect for electrolytic capacitors.
3. DIODES
   Indicated in 1SS355-TRB

NJM2296D control port status

SW1	SW2	SW3	SW4	SW5	Vout1	Vout2	Vout3
1	0	(1)	0	1	Vin2	Vin2	mute
1	1	(1)	0	1	Vin3	Vin3	Vin3
1	1	0	1	1	Vin4	Vin4	Vin4
1	1	1	1	1	Vin5	Vin5	Vin5
0	0	(0)	(0)	0	mute	mute	mute

VIN 2. VCR
VIN 3. DVD/LD
VIN 4. TV/SAT
VIN 5. FRONT
Vout1. MON out
Vout2. MR out
Vout3. VCR out

S CN901
CN354 B5B-PH-K-S
ADG FRONT V FRONT Y ADG FRONT C
J29 XDX3012

G CN391
SROUT UG +5V ADG -5V ADG V1 V2 V3 FRONT V ADG
CN351 KP200TA11L

N S. VIDEO ASSY (XWZ3522)

+5.6V -5.6V

SR OUT JA351 RKN1004
C377 YX stby V
C378 0.01 YX
CHASSIS GND

C351 YB 0.1u
C362 47/25
R385 0
R368 1k
R367 1k
R371 75
R384
R383 0
0
C365 220p
C364 220p
CN352/ JA352 (1/3) *1 MON OUT

IC352 NJM2296M
VCC Vout2 SW1 Vin1 GND Vout3 SW2 Vin2
Vout1 SW5 Vin5 SW3 Vin4 SW4 Vin3 VEE
R386 100
C361 47/25
C354 0.1u YB
S-Y FUNC. SELECTOR

LD/DVD CN353 (1/2) *1
C352 47/25
C353 0.1
R351 75
R352 75
R365 1k
R364 1k
C375 47p
R373 75
R363 1k
R386 0

C355 47/25
TV/SAT CN353 (2/2) *1
C356 0.1
R353 75
R354 75
C373 0.01
CHASSIS GND
C358 47/25
C359 0.1
R355 75
R356 75
VCR1 CN352/ JA352 (3/3) *1

IC351 NJM2296M
VCC Vout2 SW1 Vin1 GND Vout3 SW2 Vin2
Vout1 SW5 Vin5 SW3 Vin4 SW4 Vin3 VEE
C357 YB 0.1u
C363 47/25
R361 1k
C367 0.1u YB
C366 47/25
R357 1k
R358 1k
R359 100
R360 1k
C376 47p
S-C FUNC. SELECTOR

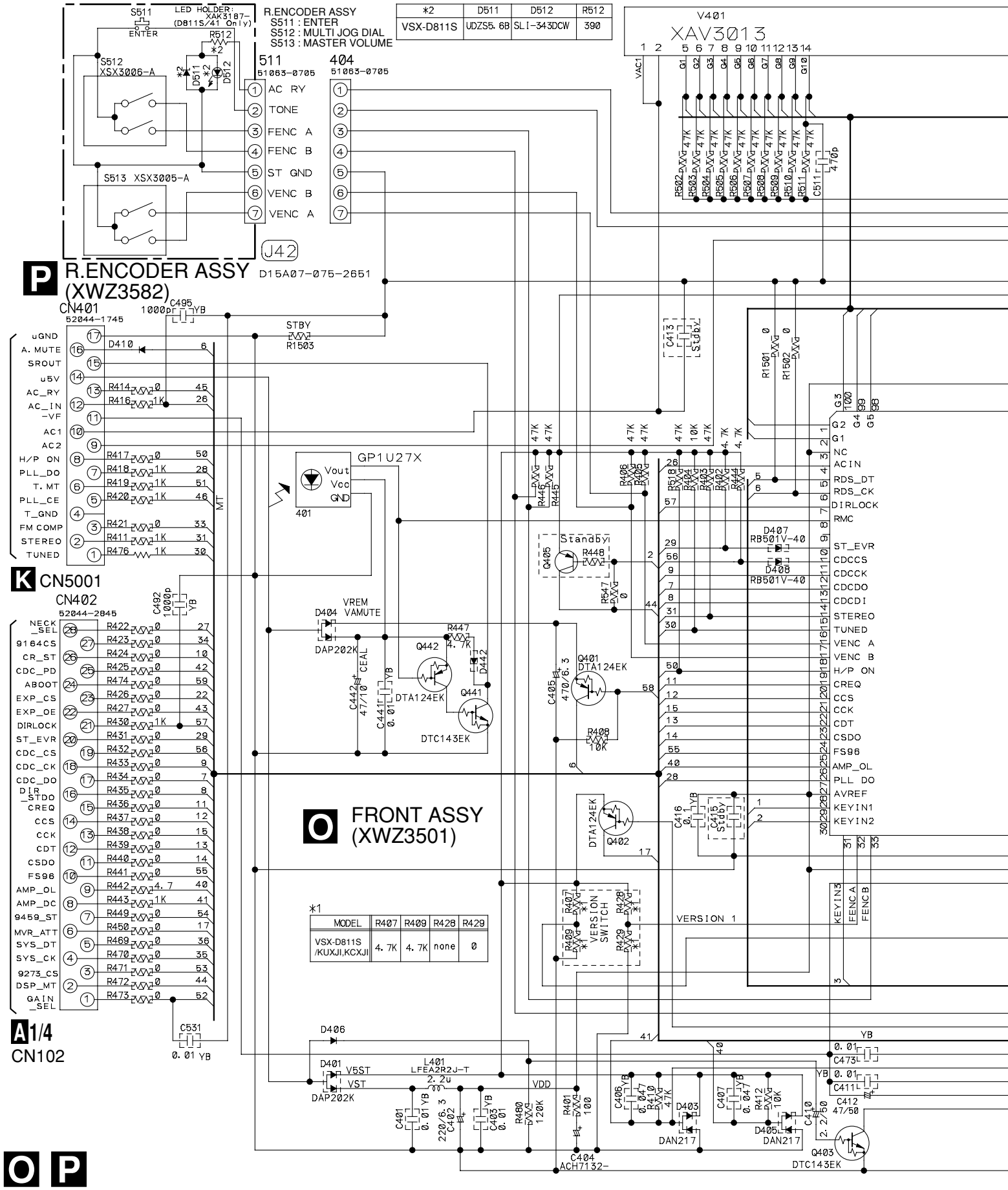
R362 1k
R372 75
D354 1SS355
D353 1SS355
D352 1SS355
D351 1SS355
R374 75

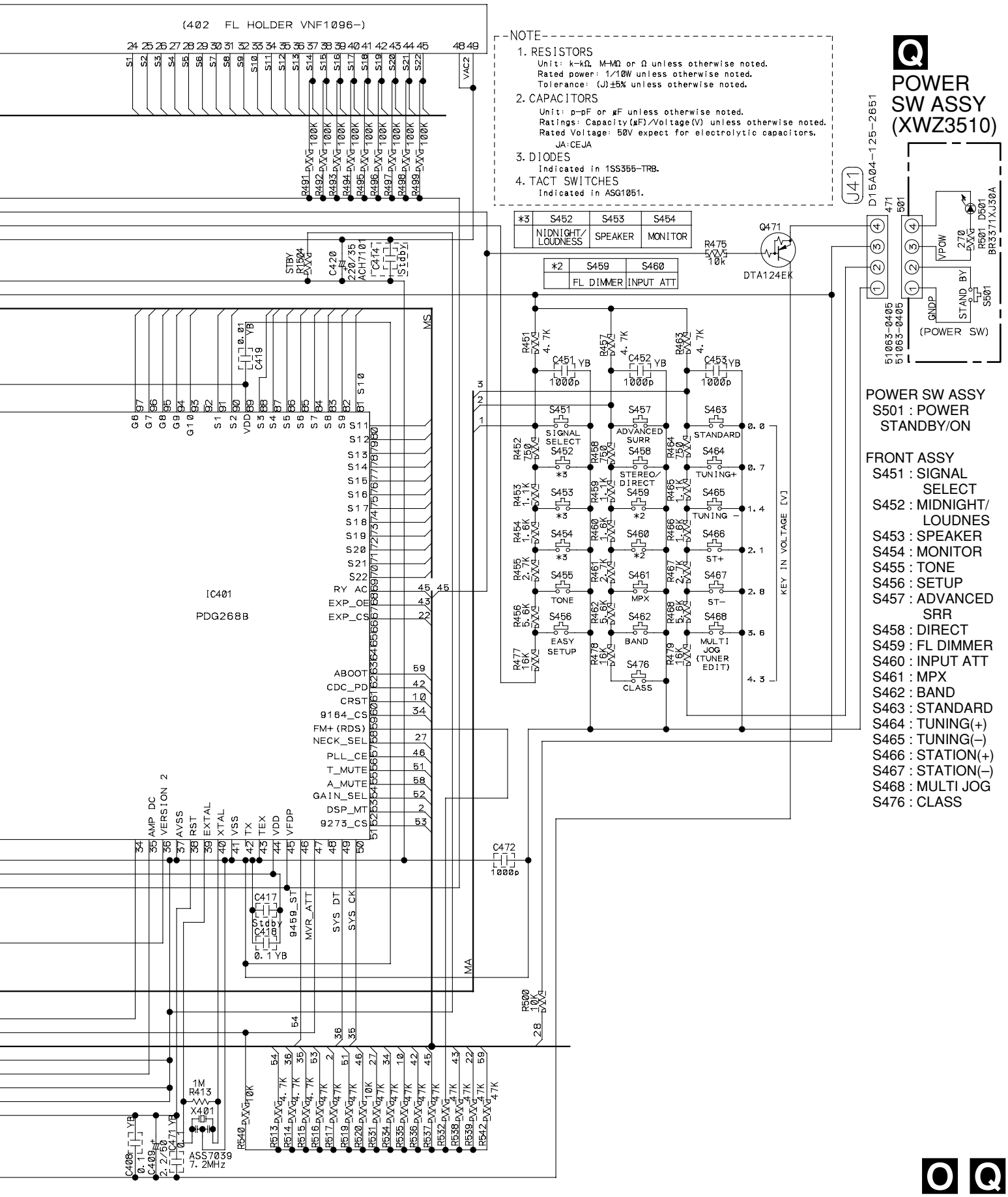
R382
R381 0
0
C369 220p
C368 220p
CN352/ JA352 (2/3) *1 VCR OUT
R370 75
R369 75
C370 220p
C371 220p
C372 0.01
CHASSIS GND

*1	CN305	308	CN352	JA352	CN353	CN309
VSX-D811S	AKB7123	AKB7089	AKP7043	NO USE	AKP7020	NO USE

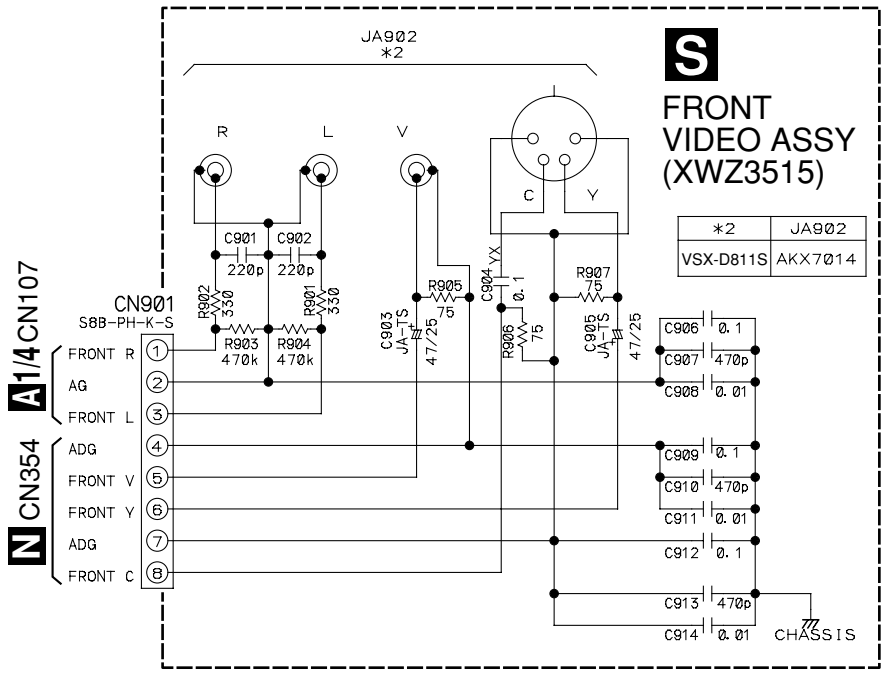
VIDEO SIGNAL FLOW
AUDIO SIGNAL FLOW

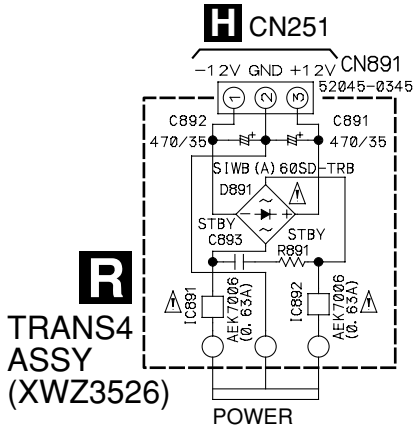
3.11 FRONT, R. ENCODER and POWER SW ASSYS



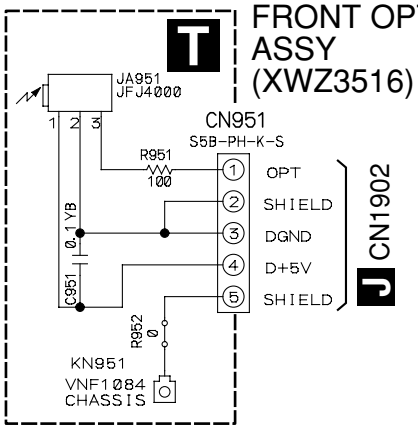

(402 FL HOLDER VNF1096-)
NOTE
1. RESISTORS
Unit: k-kΩ, M-MΩ or Ω unless otherwise noted.
Rated power: 1/10W unless otherwise noted.
Tolerance: (J)±5% unless otherwise noted.
2. CAPACITORS
Unit: p-pF or μF unless otherwise noted.
Ratings: Capacity(μF)/Voltage(V) unless otherwise noted.
Rated Voltage: 50V expect for electrolytic capacitors.
JA:CEJA
3. DIODES
Indicated in 1SS355-TRB.
4. TACT SWITCHES
Indicated in ASG1051.
*3 S452 NIDNIGHT/ LOUDNESS S453 SPEAKER S454 MONITOR
*2 S459 FL DIMMER S460 INPUT ATT
Q471 DTA124EK
R475 10k
J41 D15A04-125-2651
51063-0405
51063-0405
(POWER SW)
VPOW
STAND BY
GNDP
S501
R501 D501 BR3371XJ30A
IC401
PDG268B
S451 SIGNAL SELECT
S452 *3
S453 *3
S454 *3
S455 TONE
S456 EASY SETUP
S457 ADVANCED SURR
S458 STEREO/ DIRECT
S459 *2
S460 *2
S461 MPX
S462 BAND
S476 CLASS
S463 STANDARD
S464 TUNING+
S465 TUNING –
S466 ST+
S467 ST–
S468 MULTI JOG (TUNER EDIT)
KEY IN VOLTAGE [V]
0.0
0.7
1.4
2.1
2.8
3.6
4.3
X401 ASS7039 7.2MHz
C472 1000p
R500 10K
POWER SW ASSY S501 : POWER STANDBY/ON
FRONT ASSY
S451 : SIGNAL SELECT
S452 : MIDNIGHT/ LOUDNES
S453 : SPEAKER
S454 : MONITOR
S455 : TONE
S456 : SETUP
S457 : ADVANCED SRR
S458 : DIRECT
S459 : FL DIMMER
S460 : INPUT ATT
S461 : MPX
S462 : BAND
S463 : STANDARD
S464 : TUNING(+)
S465 : TUNING(–)
S466 : STATION(+)
S467 : STATION(–)
S468 : MULTI JOG
S476 : CLASS

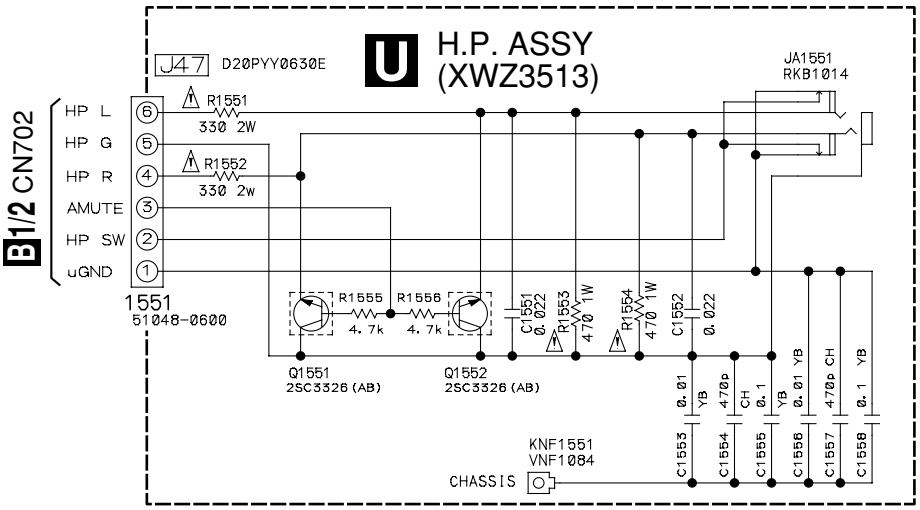
3.12 TRANS4, F. VIDEO, F. OPTICAL, H. P. , COMP. and PRI-OUT ASSYS



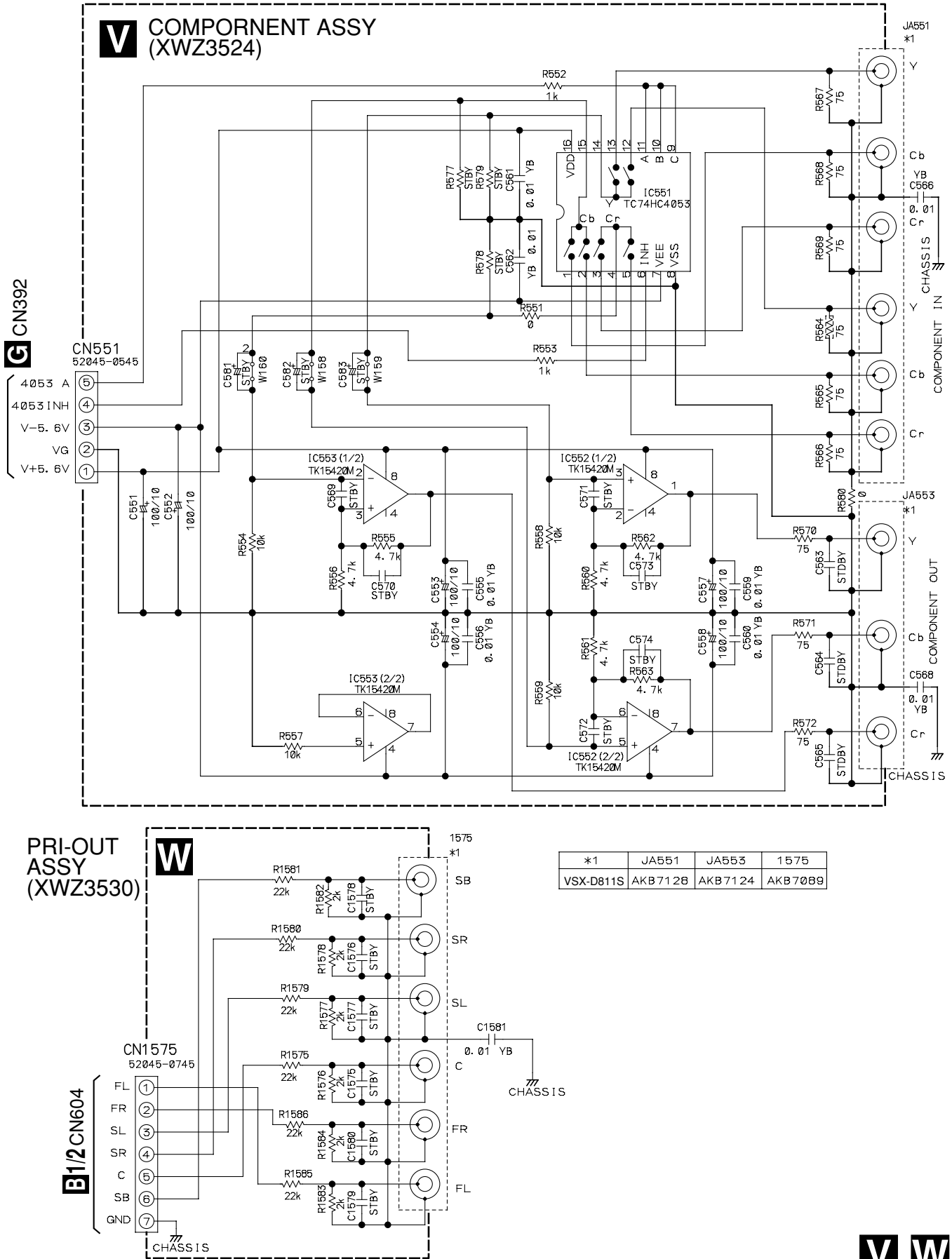


CAUTION : FOR CONTINUED PROTECTION AGAINST RISK OF FIRE. REPLACE ONLY WITH SAME TYPE NO. 491.630 FOR IC891 AND IC892 MFD, BY LITTELFUSE INC.





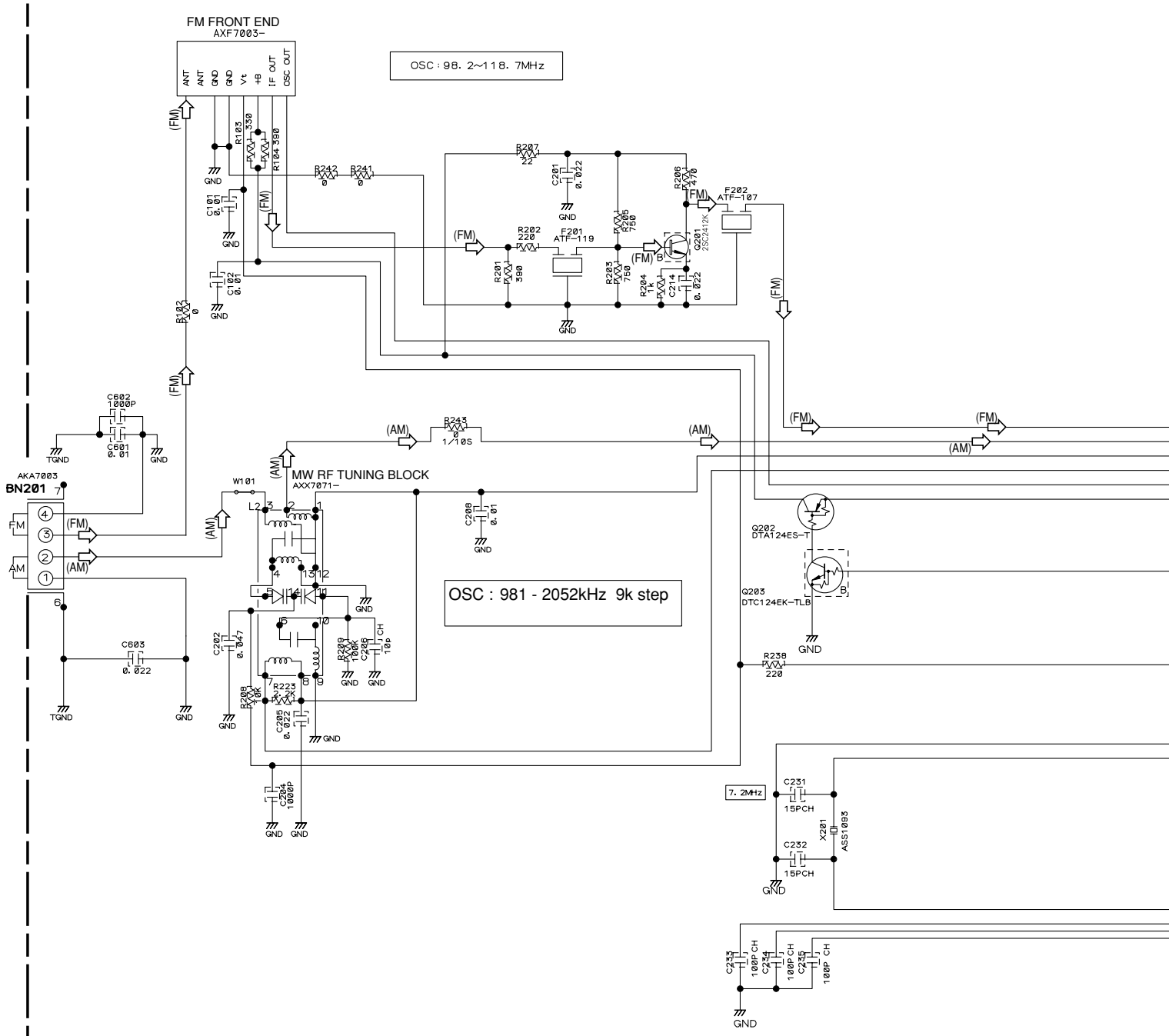
R S T U



*1	JA551	JA553	1575
VSX-D811S	AKB7128	AKB7124	AKB7089

3.13 FM/AM TUNER MODULE

X FM/AM TUNER MODULE (AXQ7231)



Notes

: The power supply is shown with the marked box.

1. RESISTORS

Indicated in Ω, 1/16W±5% Tolerance unless otherwise noted K;KΩ, M;MΩ.

2. CAPACITORS

Indicated in Capacity(μF)/VOLTAGE(V) unless otherwise noted P;PF.

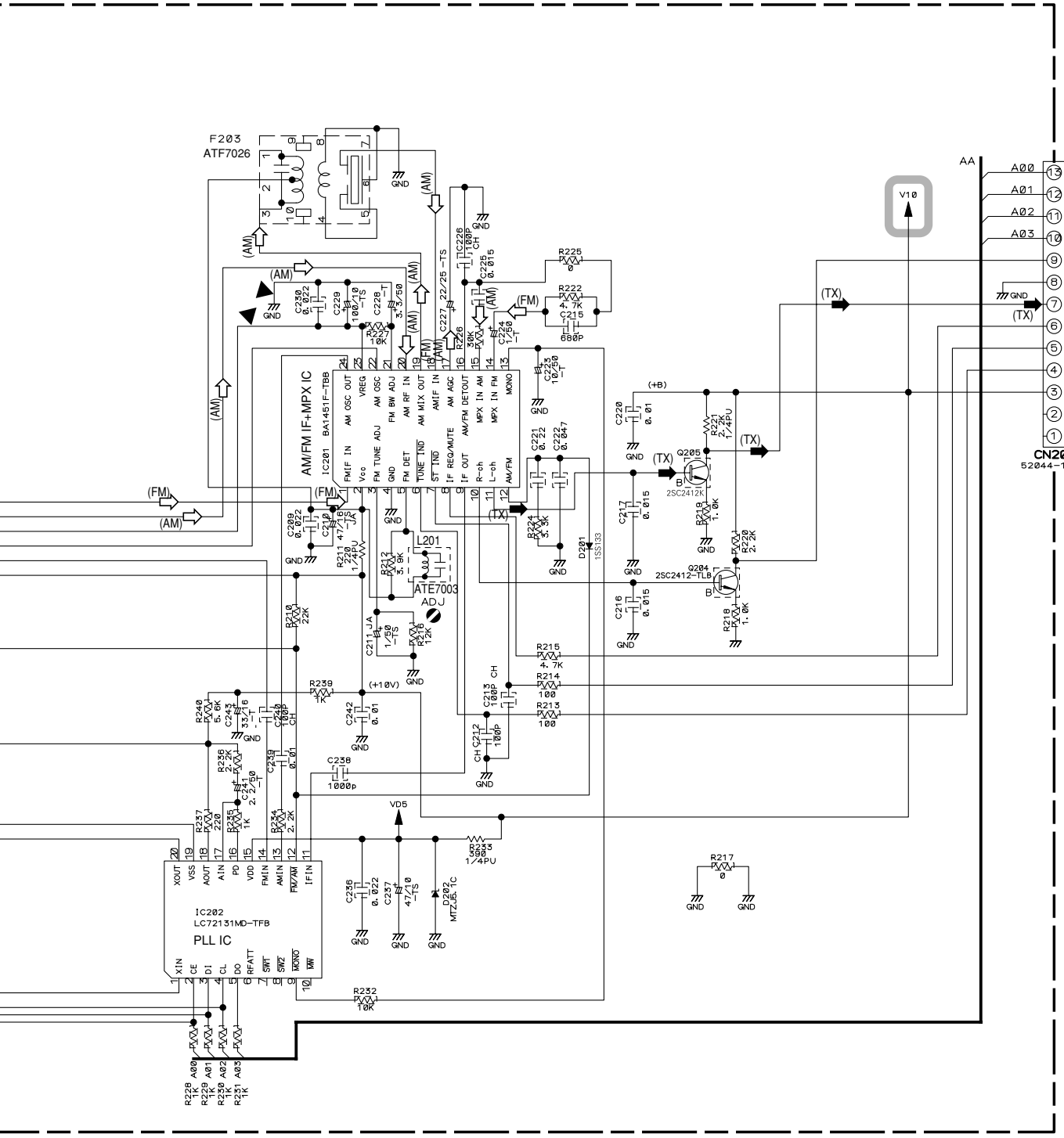
3. DIODES

No mark diode is 1SS133.

(TX) : AUDIO SIGNAL ROUTE (TUNER)

(AM) : AM SIGNAL ROUTE

(FM) : FM SIGNAL ROUTE



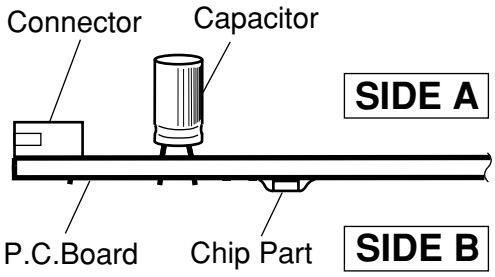
4. PCB CONNECTION DIAGRAM

NOTE FOR PCB DIAGRAMS :

1. Part numbers in PCB diagrams match those in the schematic diagrams.
2. A comparison between the main parts of PCB and schematic diagrams is shown below.

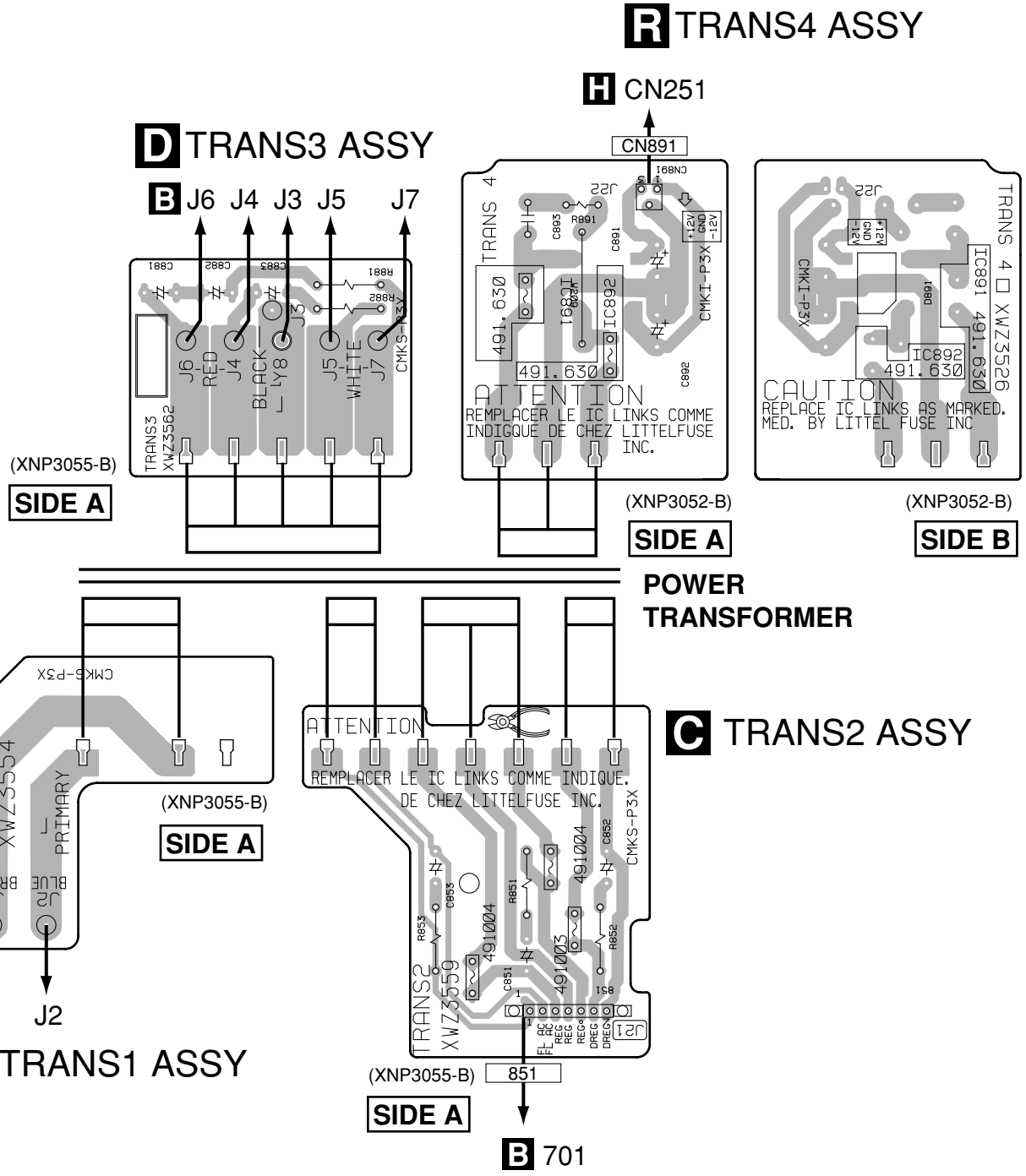
Symbol In PCB Diagrams	Symbol In Schematic Diagrams	Part Name
B C E	B C E B C E	Transistor
B C E	B C E B C E	Transistor with resistor
D G S	D G S D G S	Field effect transistor
		Resistor array
		3-terminal regulator

3. The parts mounted on this PCB include all necessary parts for several destinations.
   For further information for respective destinations, be sure to check with the schematic diagram.
4. View point of PCB diagrams.



4.1 TRANS2, TRANS3, TRANS1 and TRANS4 ASSYS

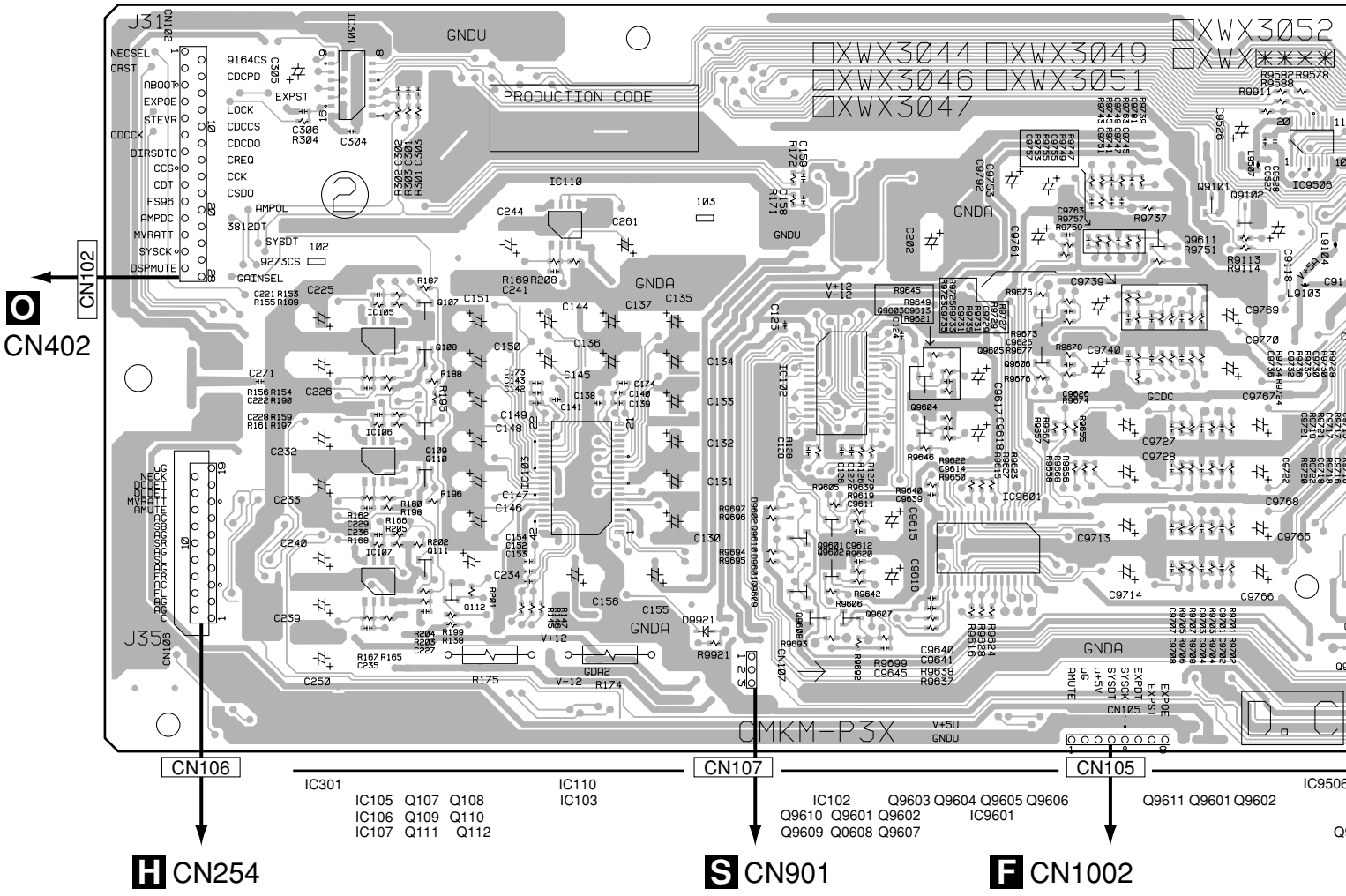
SIDE A **SIDE B**



4.2 DD & INPUT ASSY

SIDE A

A D.D & INPUT ASSY



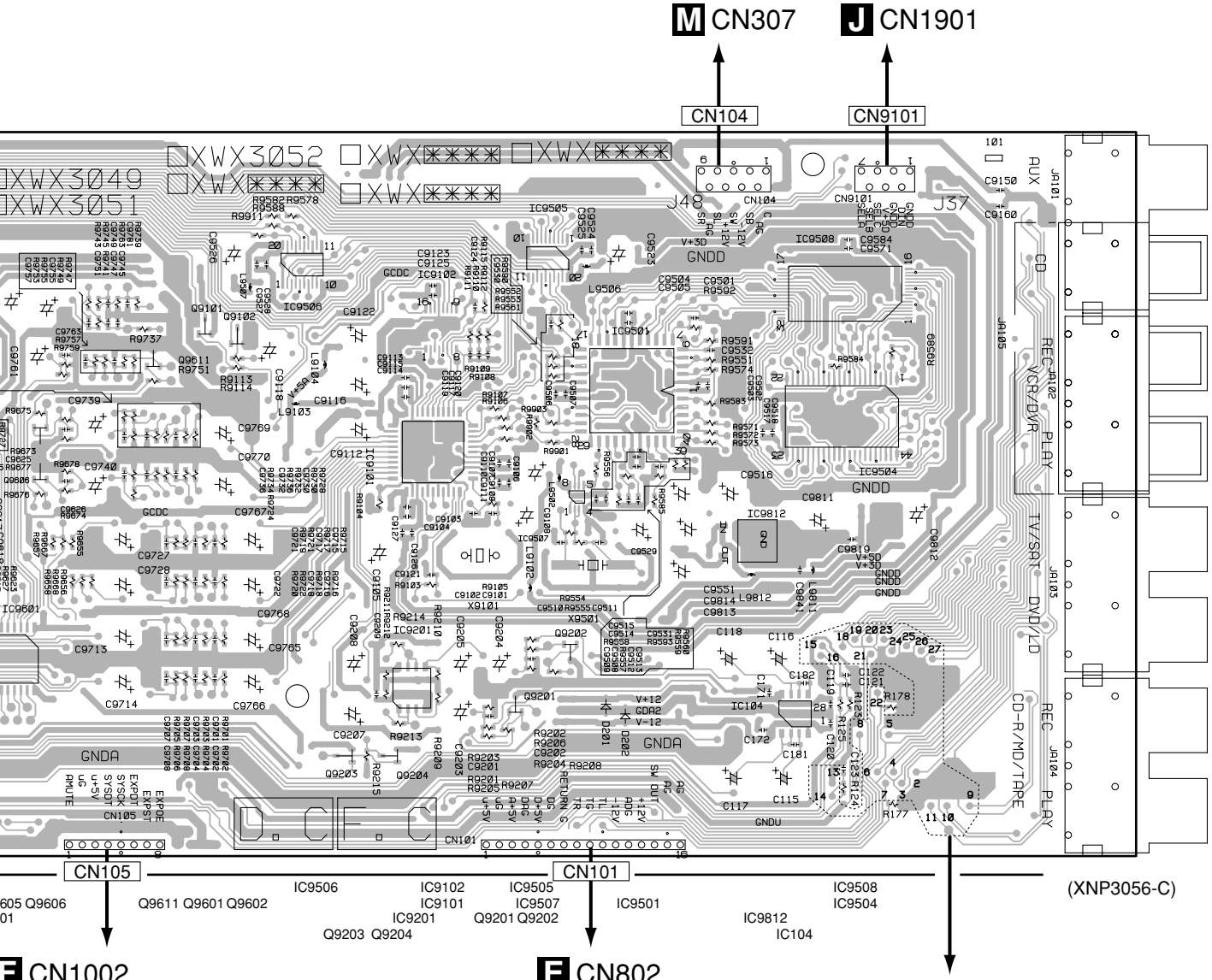
O CN402

H CN254

S CN901

F CN1002

SIDE A



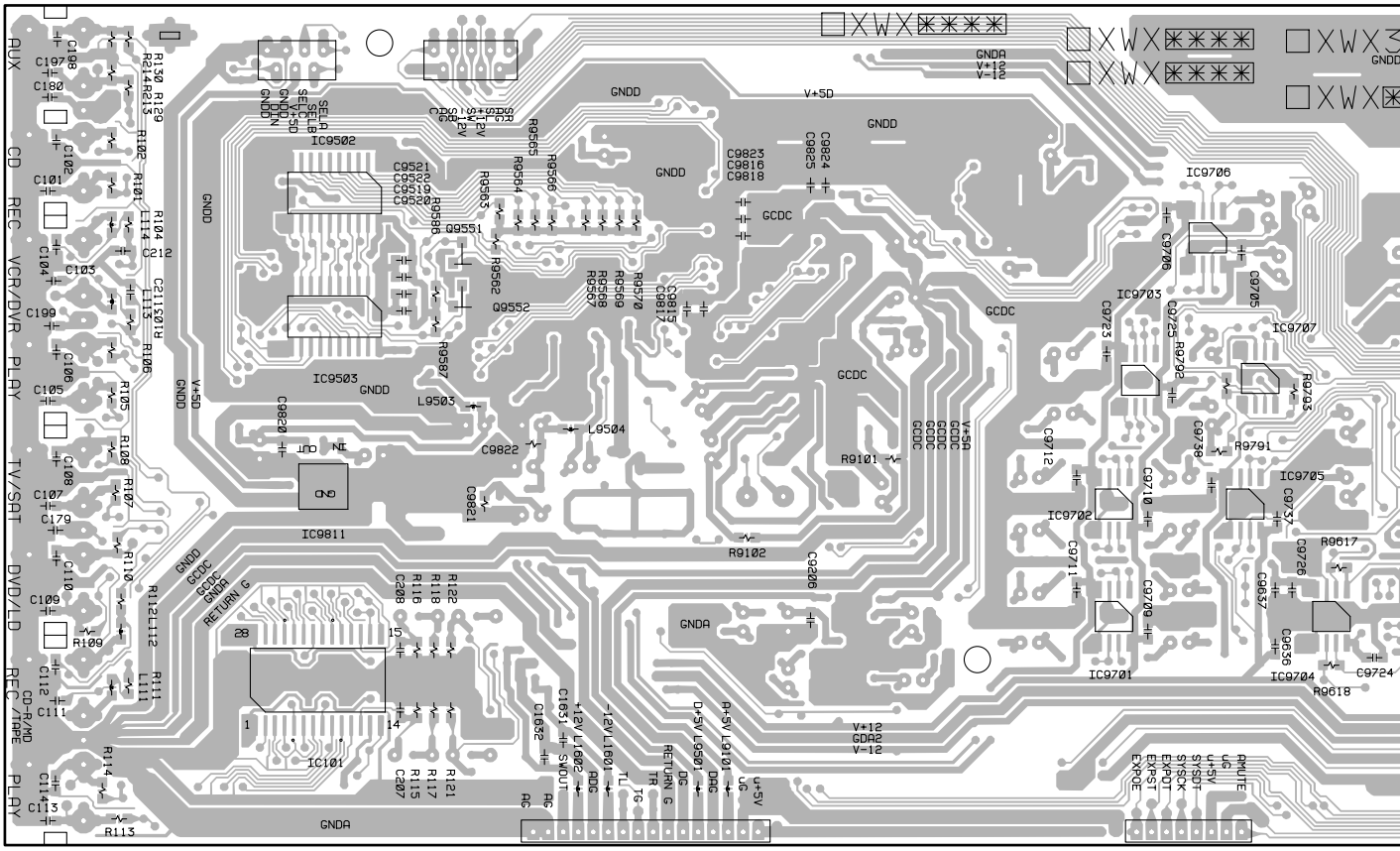
Note : The pin of function IC (IC101 TC9273F-007) can be checked from side-A by the through-hole round. The pin No. is printed on the side-A.

Even if the FM/AM TUNER MODULE is disconnected, other functions can operate.

A

SIDE B

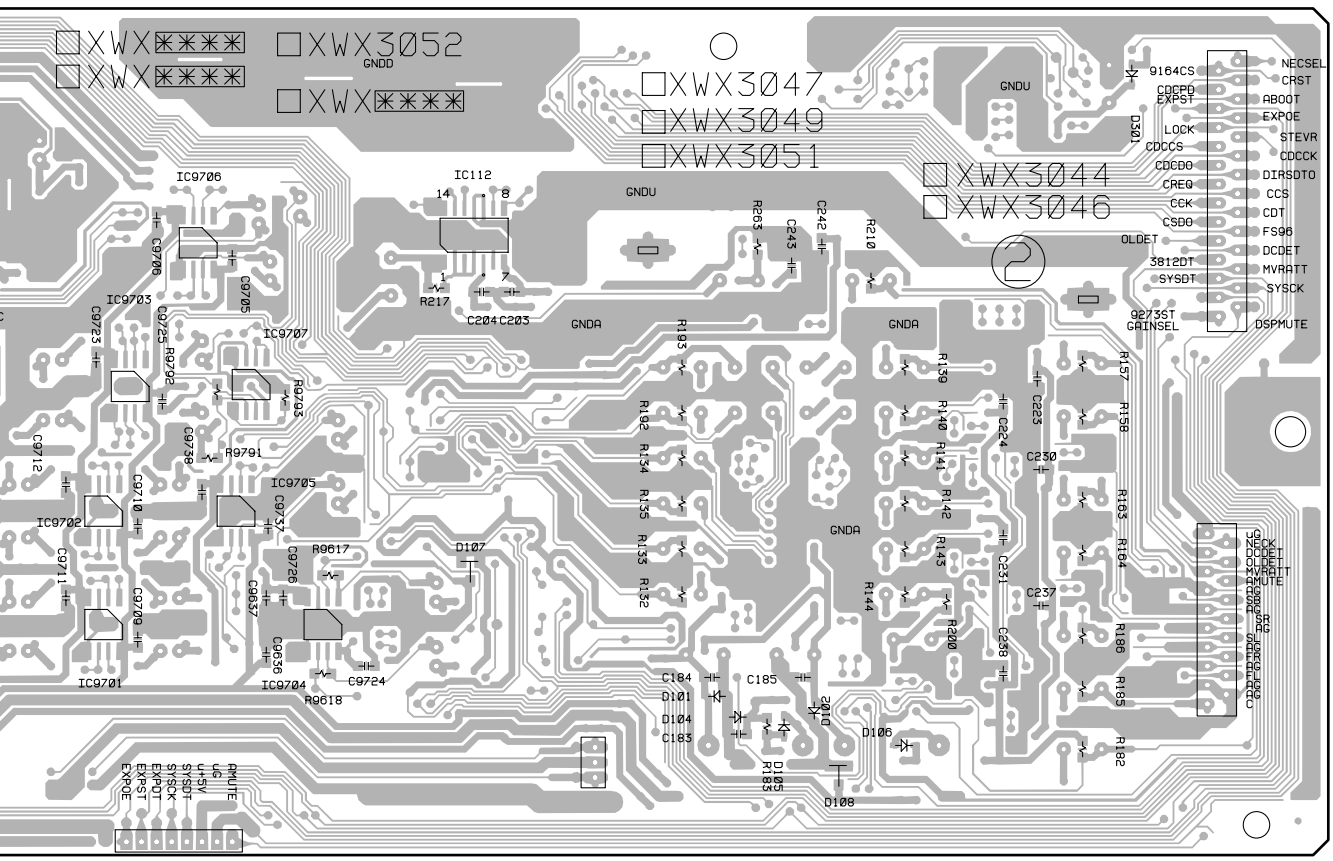
A D.D & INPUT ASSY



IC9502
IC9503 Q9551 Q9552
IC9811
IC101

IC9705
IC9703 IC9707
IC9702 IC9705
IC9701 IC9704

SIDE B



IC9705
IC9703 IC9707
IC9702 IC9705
IC9701 IC9704

IC112

(XNP3056-C)

A

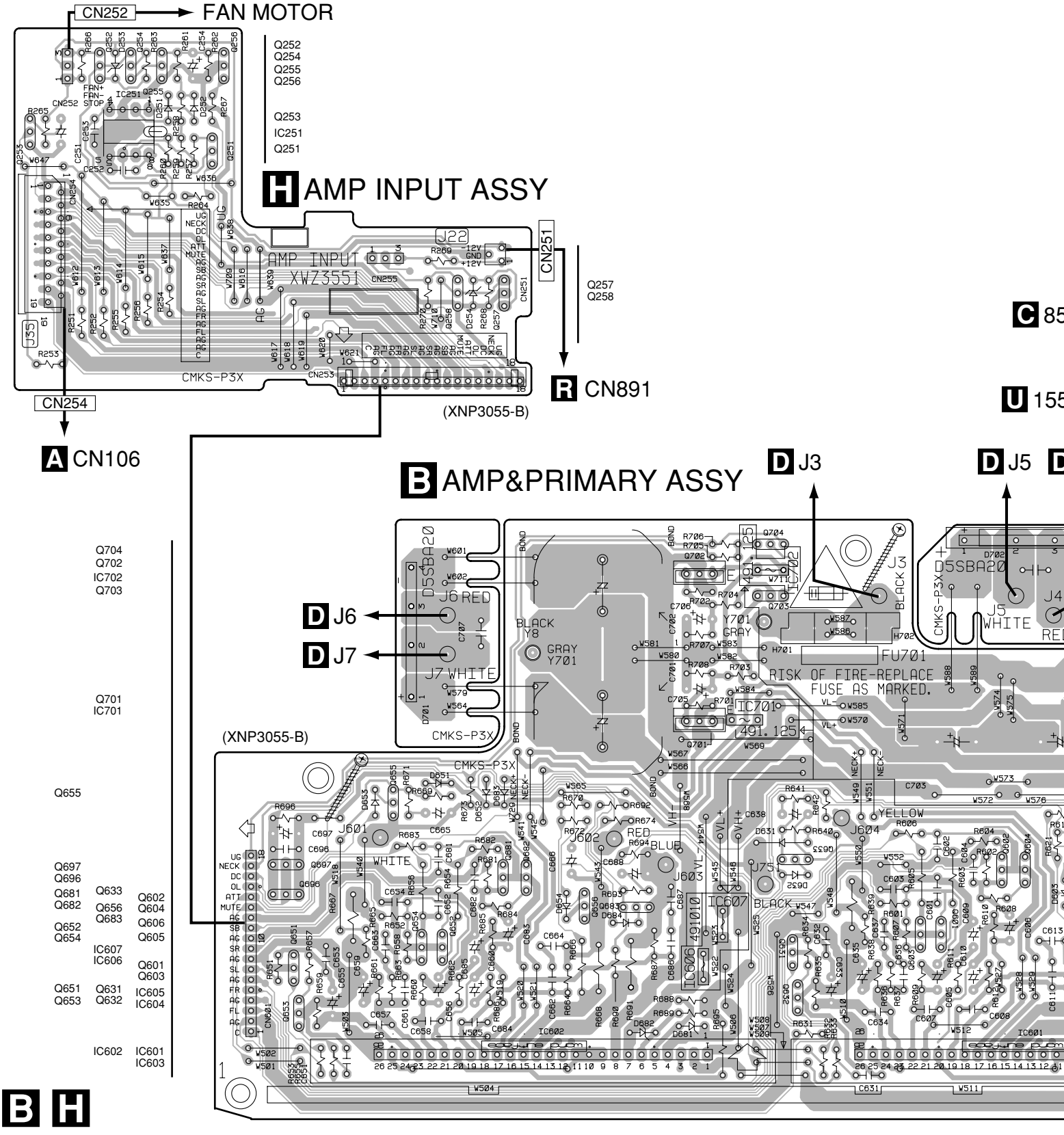
B

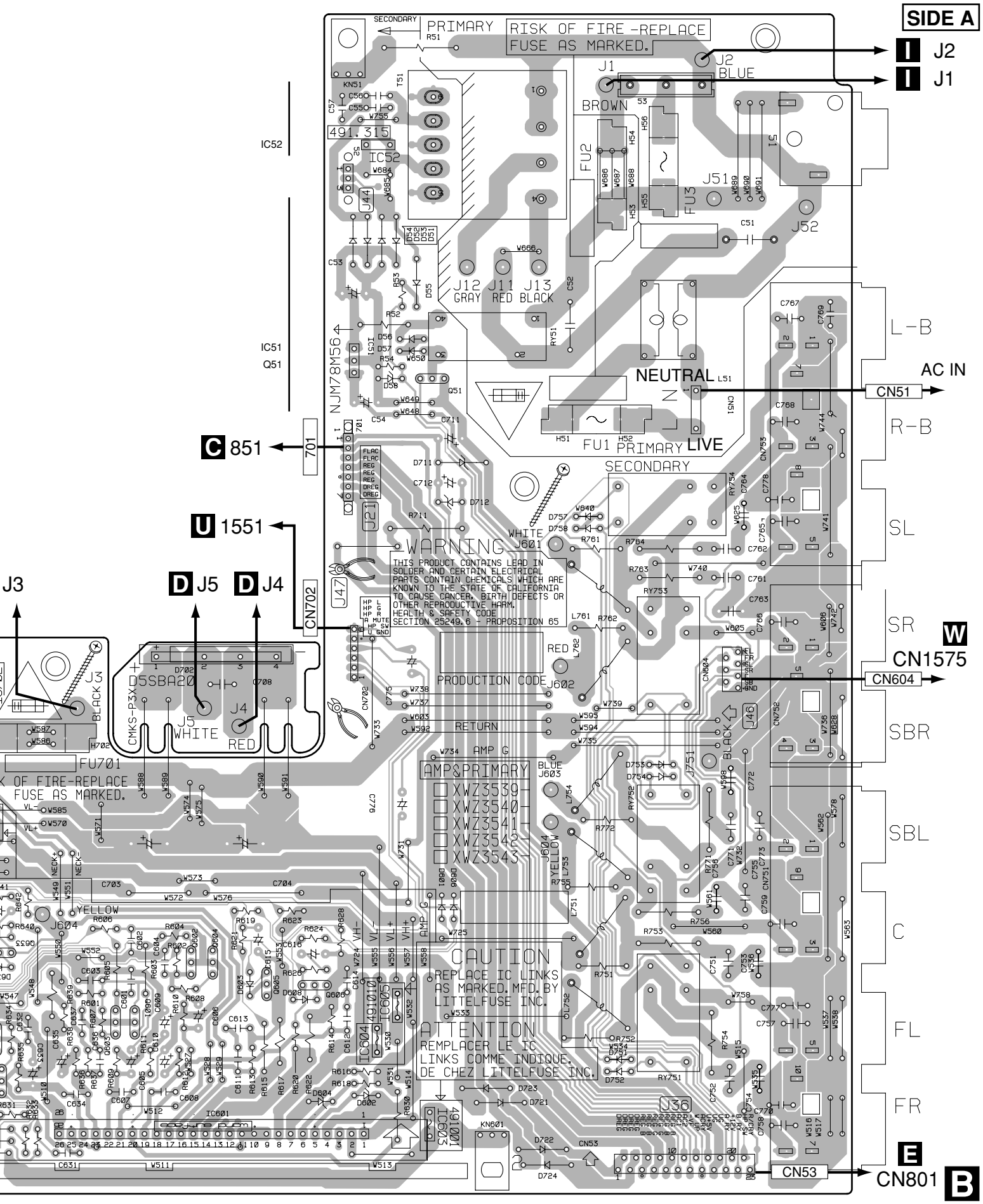
C

D

4.3 AMP & PRIMARY and AMP INPUT ASSYS

SIDE A




SIDE A
I J2
I J1
J2 BLUE
J1 BROWN
PRIMARY
SECONDARY
RISK OF FIRE -REPLACE FUSE AS MARKED.
IC52
IC51
Q51
NJM78M56
491. 315
J12 J11 J13
GRAY RED BLACK
J51
J52
FU2
FU3
NEUTRAL L51
AC IN
CN51
FU1 PRIMARY LIVE
C 851
701
U 1551
CN702
J3
D J5
D J4
J4
J5 WHITE
RED
BLACK
D5SBA20
CMKS-P3X
WARNING
THIS PRODUCT CONTAINS LEAD IN SOLDER AND CERTAIN ELECTRICAL PARTS CONTAIN CHEMICALS WHICH ARE KNOWN TO THE STATE OF CALIFORNIA TO CAUSE CANCER, BIRTH DEFECTS OR OTHER REPRODUCTIVE HARM. HEALTH & SAFETY CODE SECTION 25249.6 - PROPOSITION 65
WHITE J601
RED J602
PRODUCTION CODE
RETURN
AMP G
AMP&PRIMARY
BLUE J603
YELLOW J604
XWZ3539
XWZ3540
XWZ3541
XWZ3542
XWZ3543
CAUTION
REPLACE IC LINKS AS MARKED. MFD. BY LITTELFUSE INC.
ATTENTION
REMPLACER LE IC LINKS COMME INDIQUE. DE CHEZ LITTELFUSE INC.
IC604 491010
IC605 491001
IC601
KN601
L-B
R-B
SL
SR
SBR
SBL
C
FL
FR
W CN1575
CN604
E CN53
CN801 B

4.4 FRONT, R. ENCODER, POWER SW and H. P. ASSYS

SIDE A

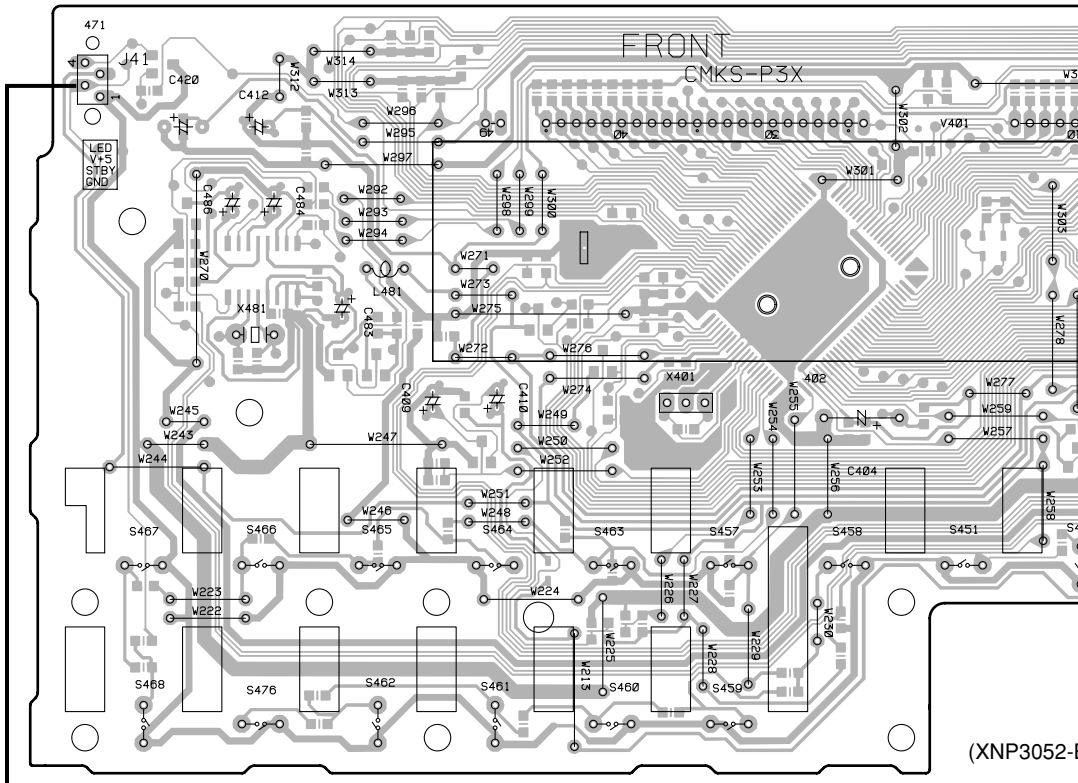
A

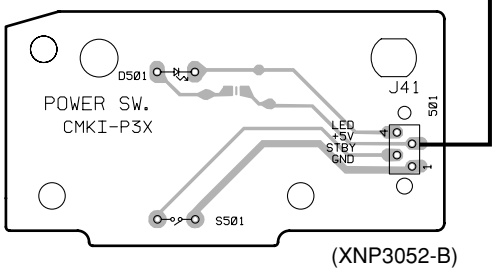
B

C

D

O FRONT ASSY

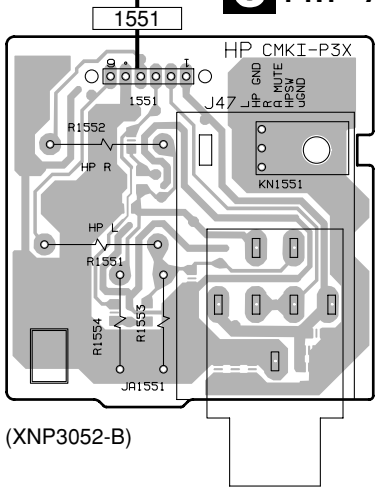




Q POWER SW ASSY

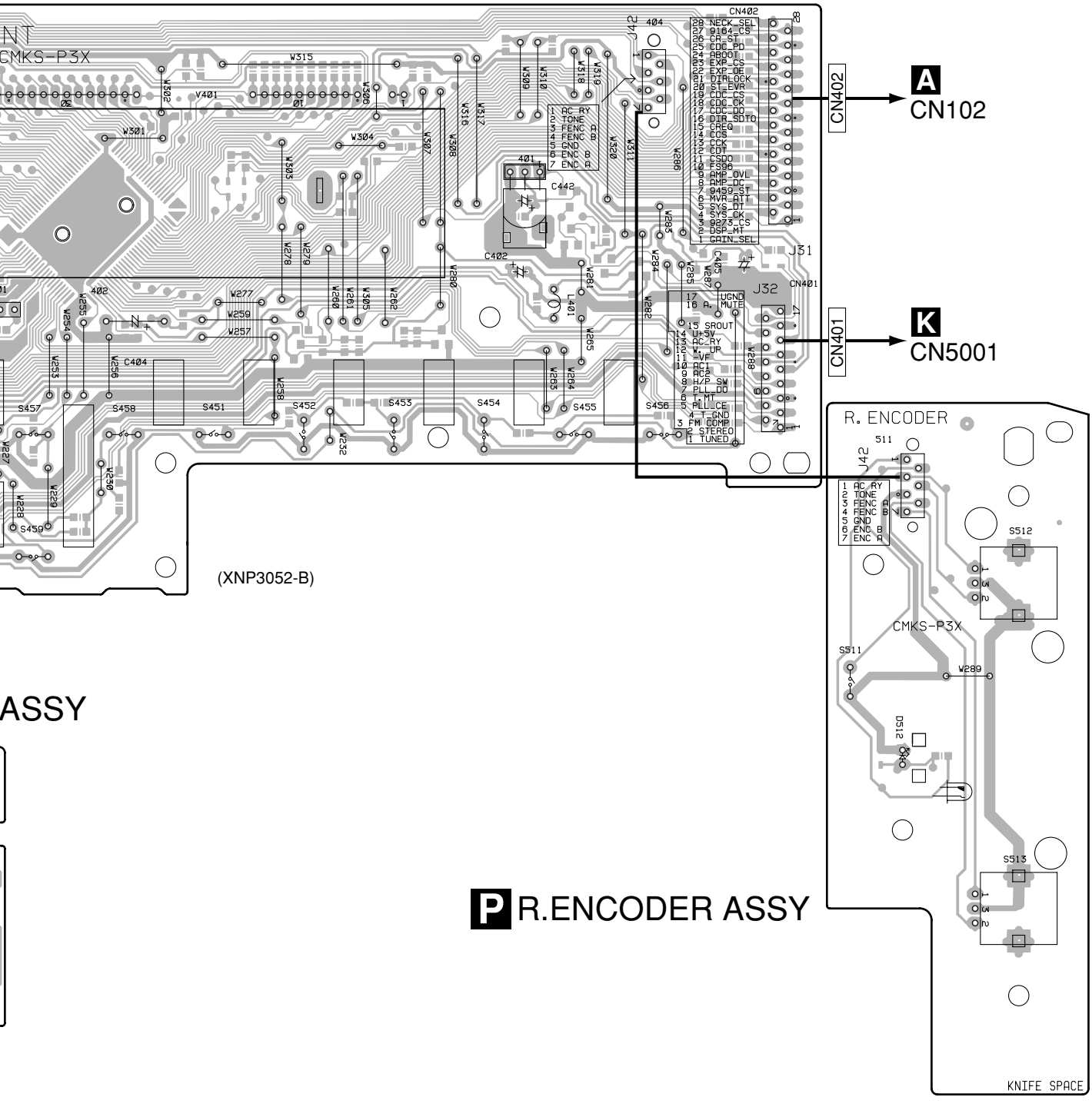
B CN702

U H.P ASSY



O Q U

SIDE A



ASSY

P R.ENCODER ASSY

SIDE B

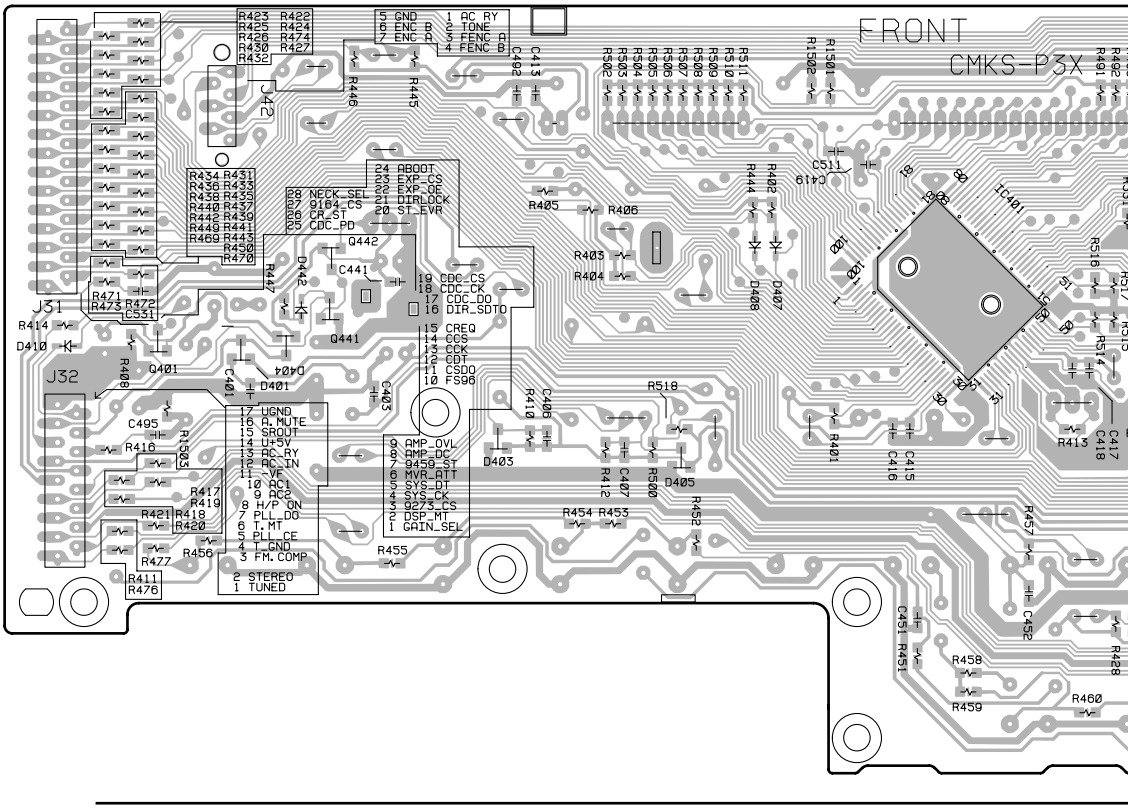
A

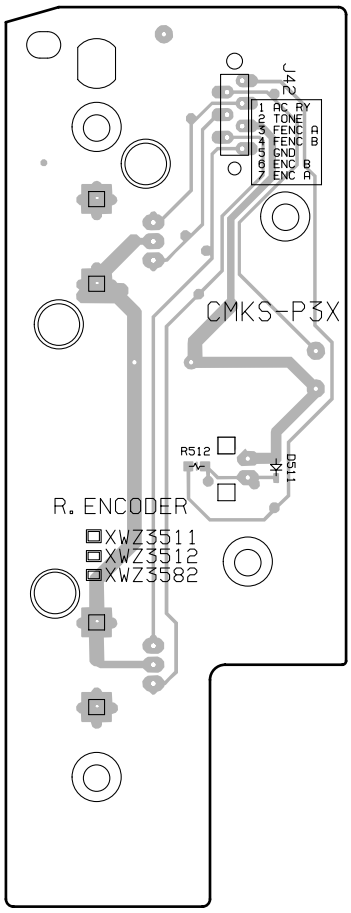
B

C

D

O FRONT ASSY

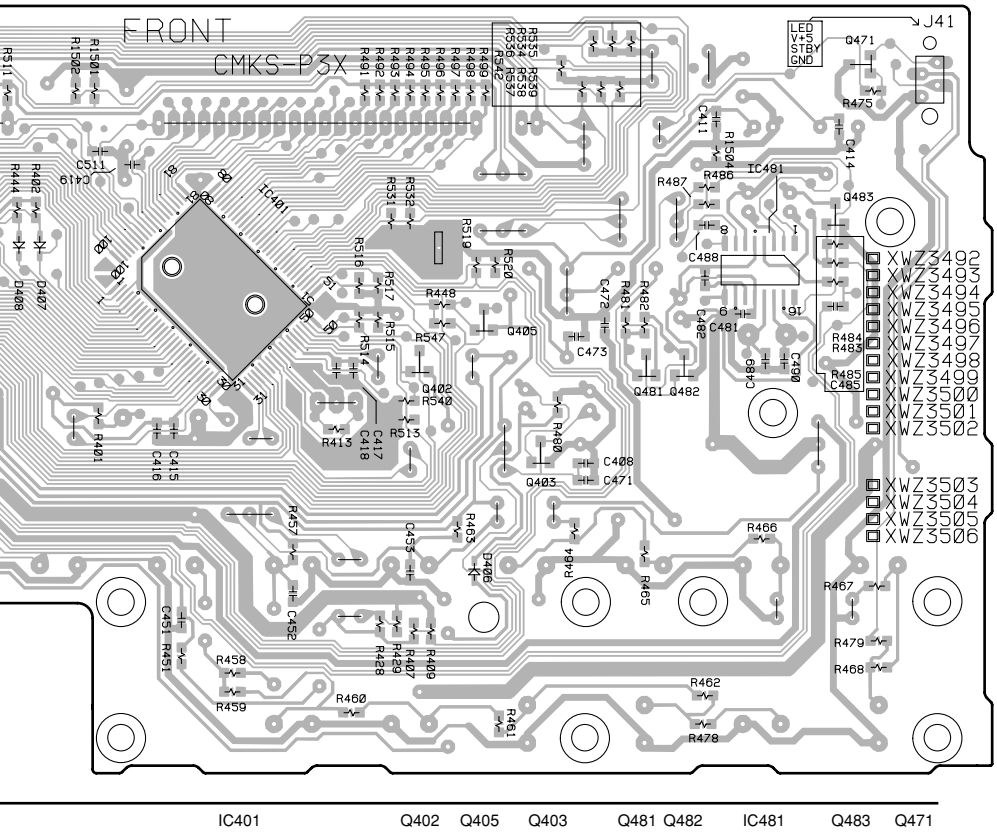




(XNP3052-B)

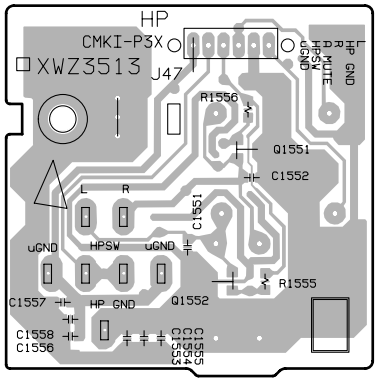
P R.ENCODER ASSY

SIDE B

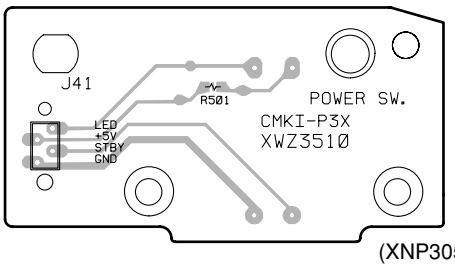


(XNP3052-B)

U H.P ASSY



(XNP3052-B)



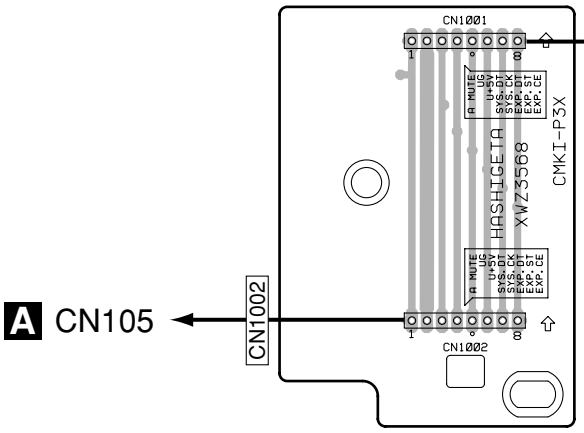
(XNP3052-B)

Q POWER SW ASSY

4.5 REGULATOR, HASHIGETA and KAWA ASSYS

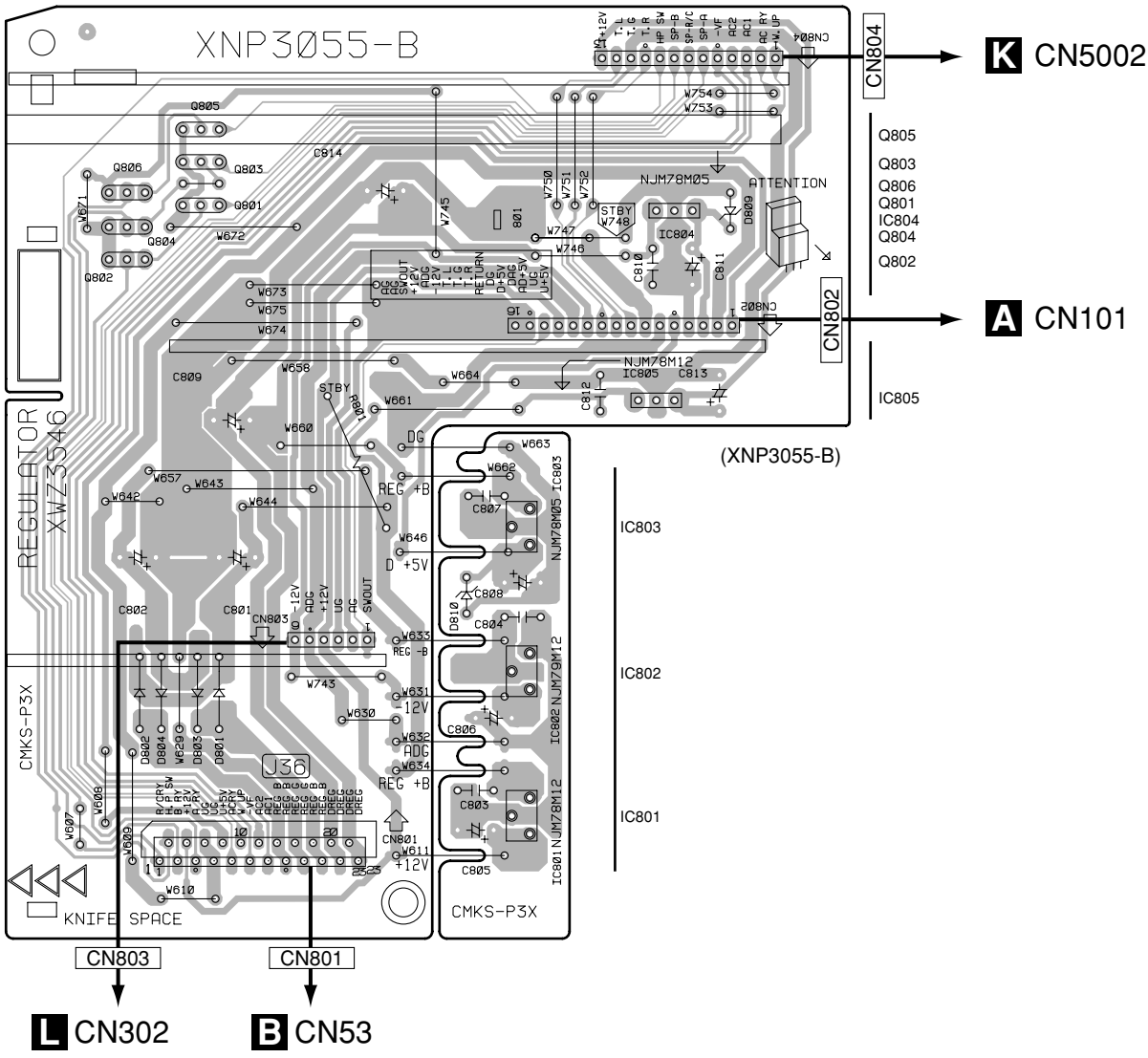
SIDE A **SIDE A**

F HASHIGETA ASSY



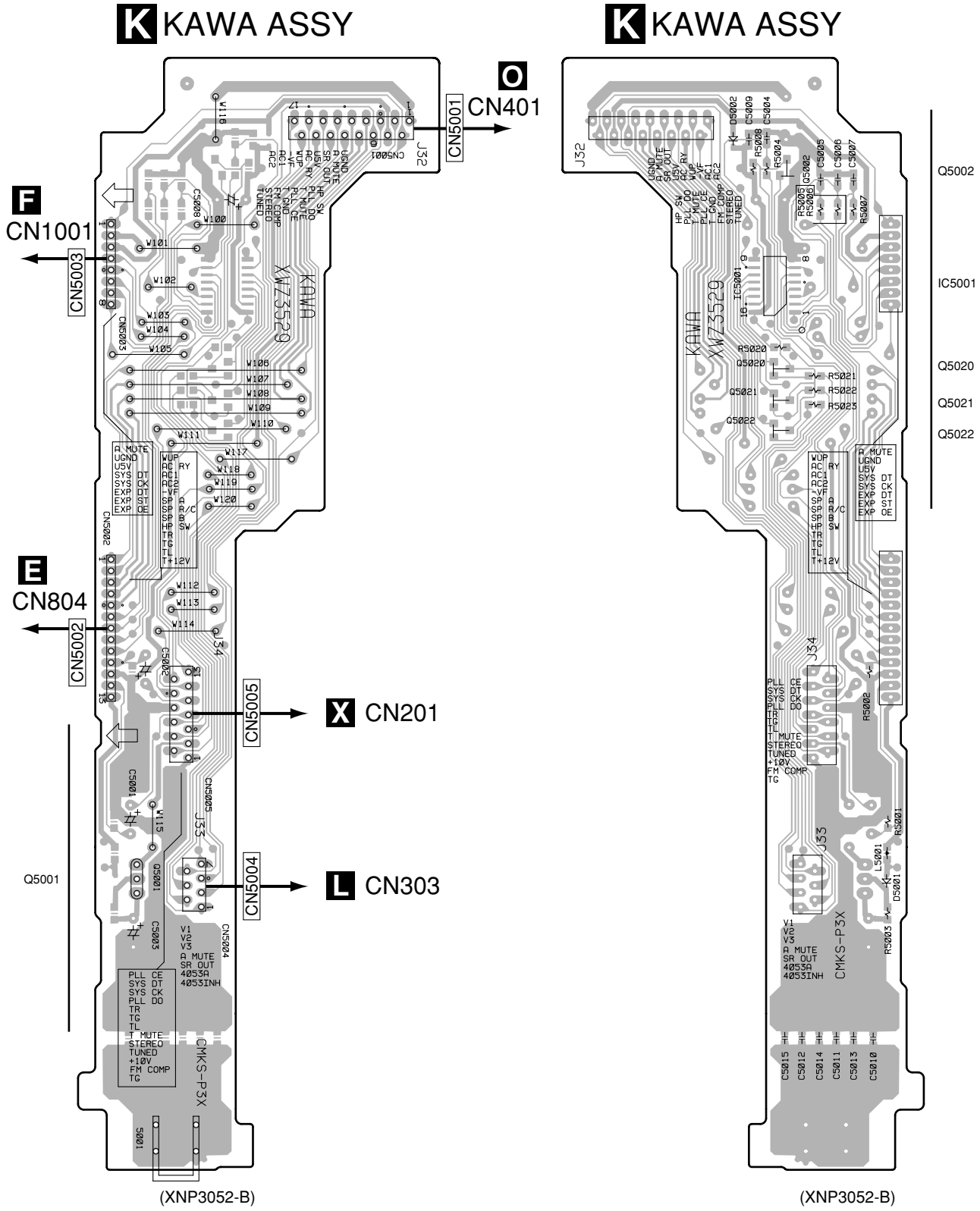
(XNP3055-B)

E REGULATOR ASSY



E F **E F**

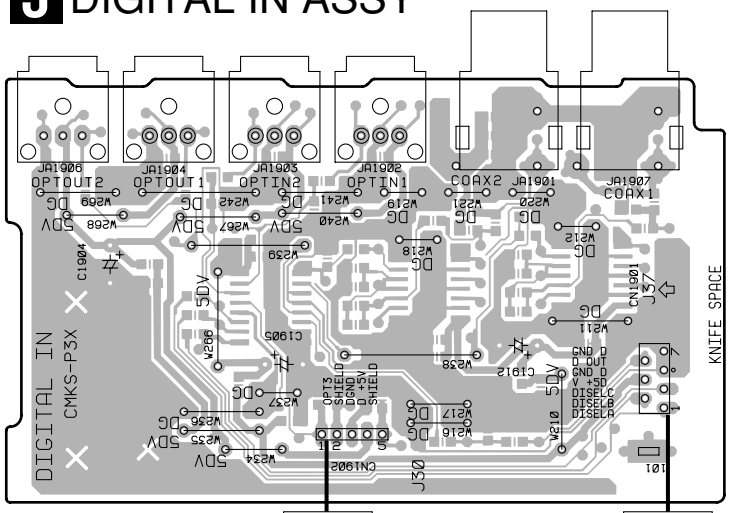
SIDE A **SIDE B**


K KAWA ASSY
K KAWA ASSY
O
CN401
CN5001
F
CN1001
CN5003
E
CN804
CN5002
X
CN201
CN5005
L
CN303
CN5004
Q5001
Q5002
IC5001
Q5020
Q5021
Q5022
(XNP3052-B)
(XNP3052-B)

4.6 BOARD TO BOARD, DIGITAL IN, VIDEO and 6CH IN ASSYS

SIDE A

J DIGITAL IN ASSY



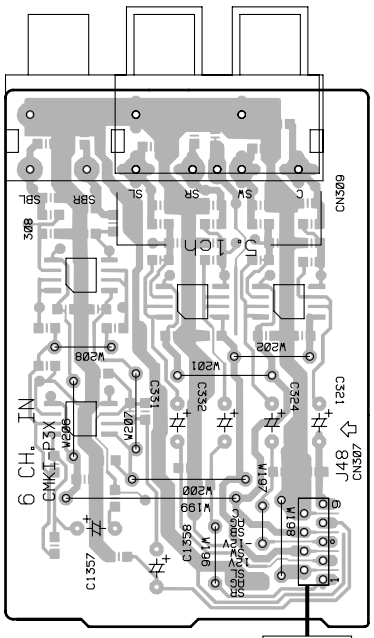
(XNP3052-B)

T CN951

A CN9101

SIDE A

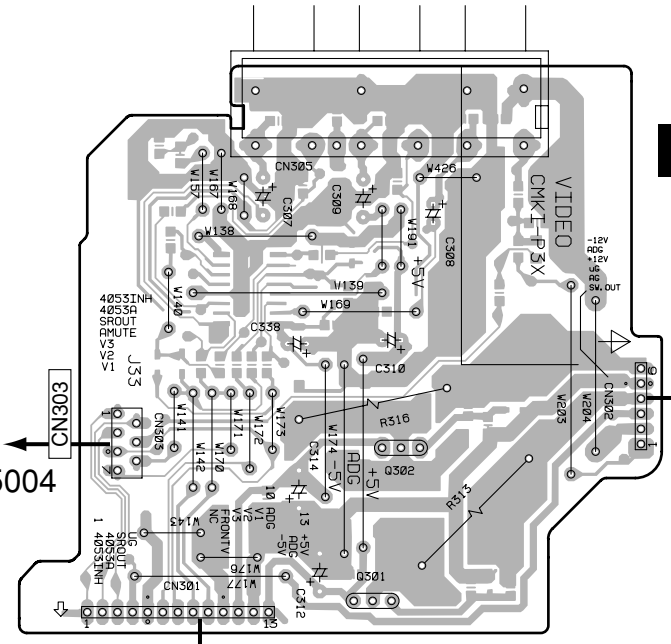
M 6CH IN ASSY



(XNP3052-B)

A CN104

L VIDEO ASSY

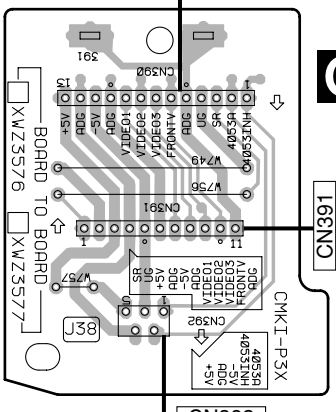


K CN5004

E CN803

(XNP3052-B)

G BOARD TO BOARD ASSY



N CN351

V CN551

(XNP3055-B)

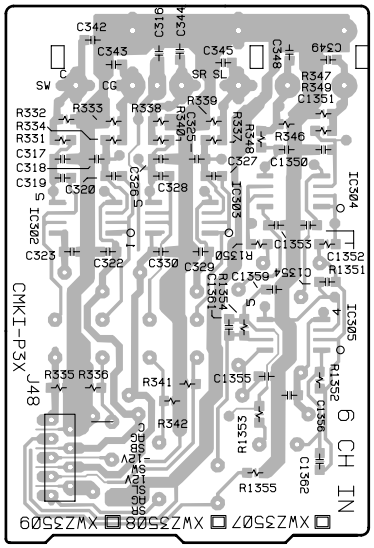
G J L M

G J L M

SIDE B

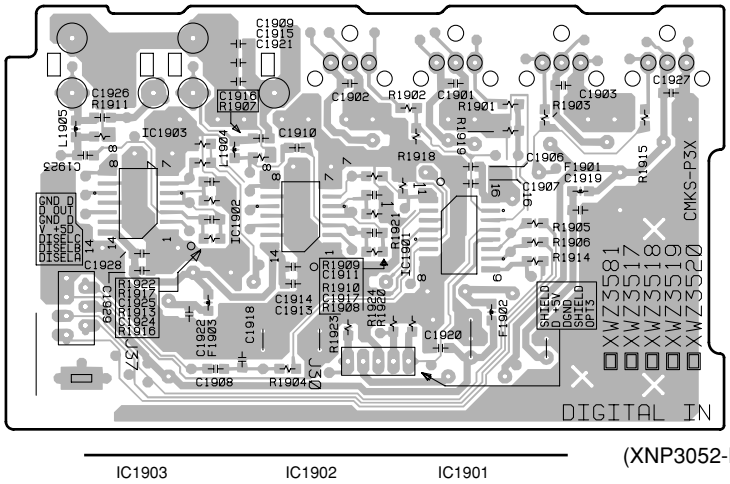
SIDE B

M 6CH IN ASSY



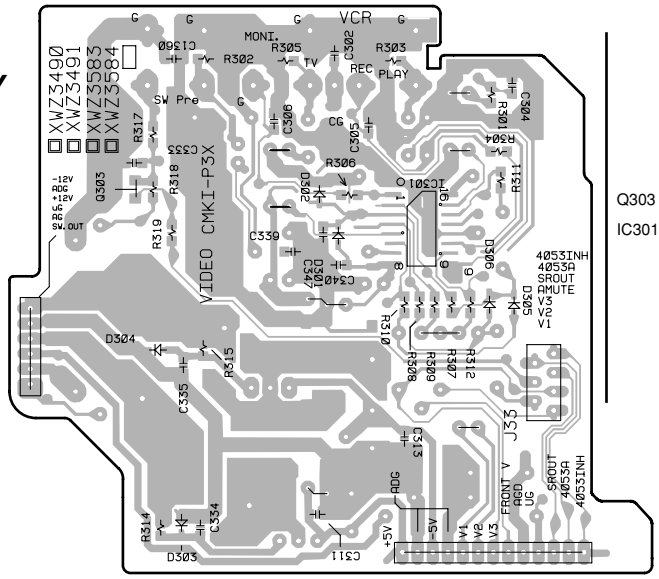
(XNP3052-B)

J DIGITAL IN ASSY



(XNP3052-B)

L VIDEO ASSY



(XNP3052-B)

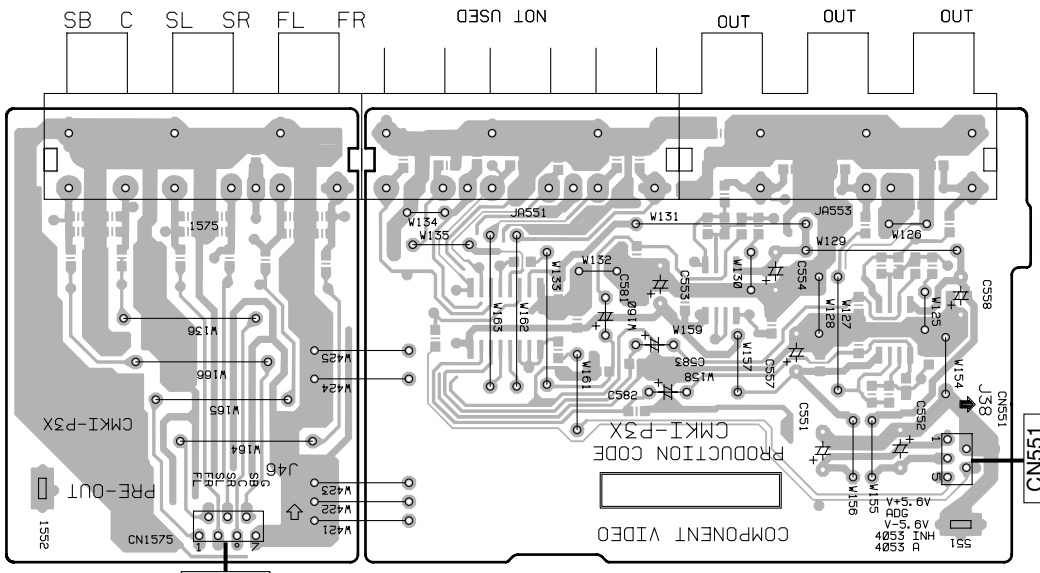
4.7 S. VIDEO, F. VIDEO, F. OPTICAL, COMPORNENT and PRI-OUT ASSYS

SIDE A

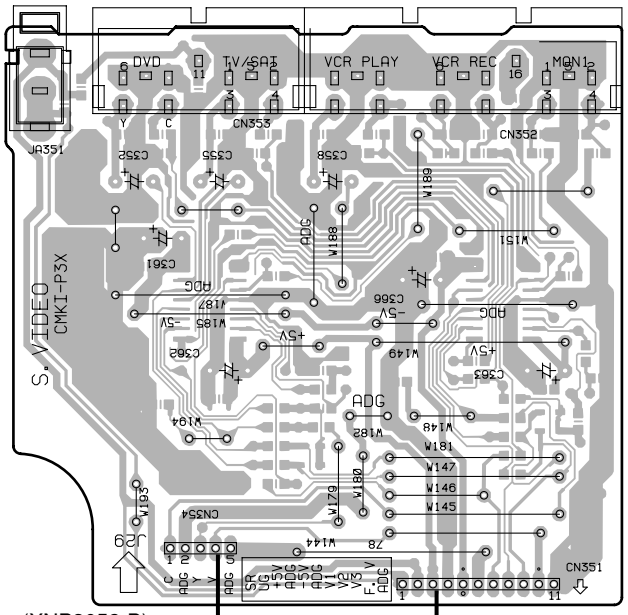
W PRE-OUT ASSY

V COMPORNENTASSY

SIDE A



B CN604

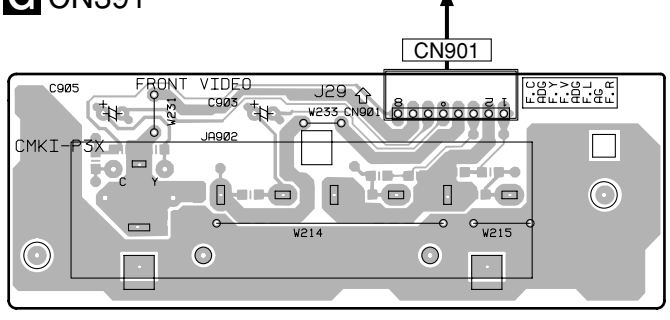


N S. VIDEO ASSY

S CN901 **G** CN391

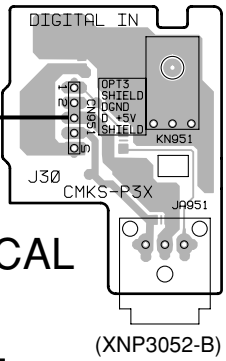
A CN107

N CN354



S FRONT VIDEO ASSY

J CN1902

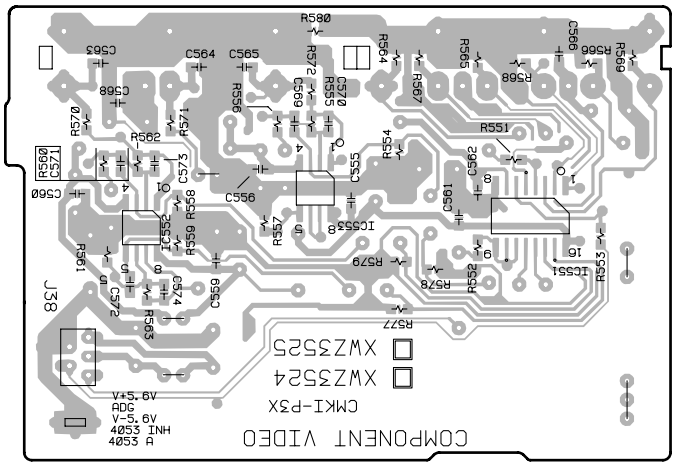


T FRONT OPTICAL ASSY

N S T V W **N S T V W**

SIDE B **SIDE B**

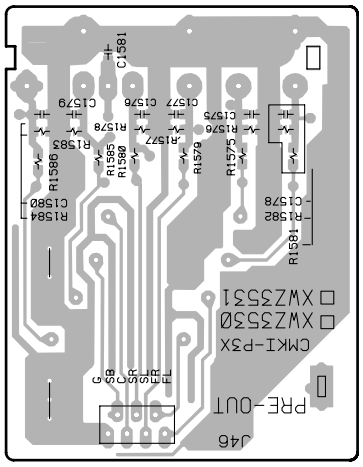
V COMPORNENTASSY



(XNP3052-B)

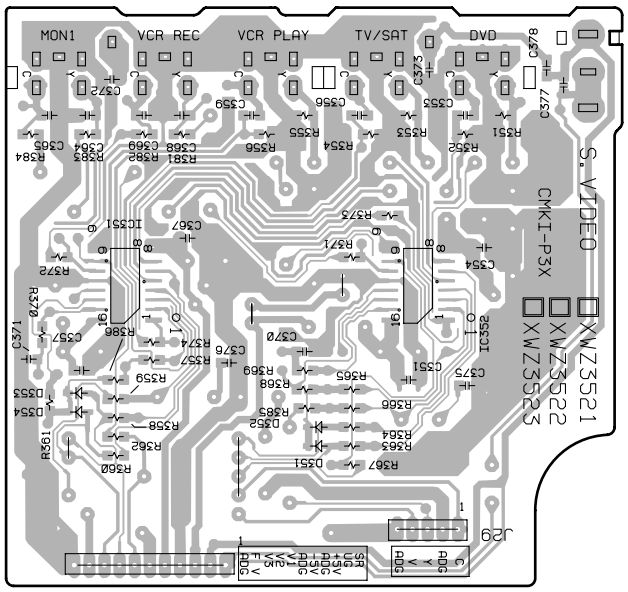
IC552 IC551

W PRE-OUT ASSY



(XNP3052-B)

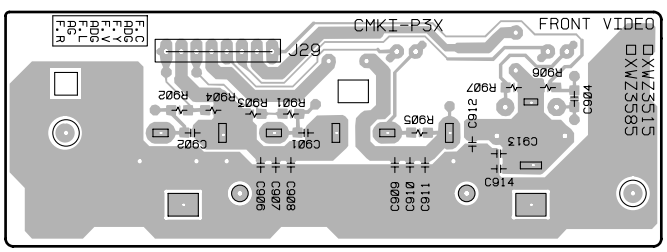
N S. VIDEO ASSY



IC351
IC352

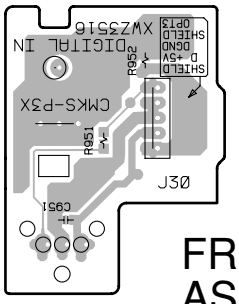
(XNP3052-B)

S FRONT VIDEO ASSY



(XNP3052-B)

T FRONT OPTICAL ASSY



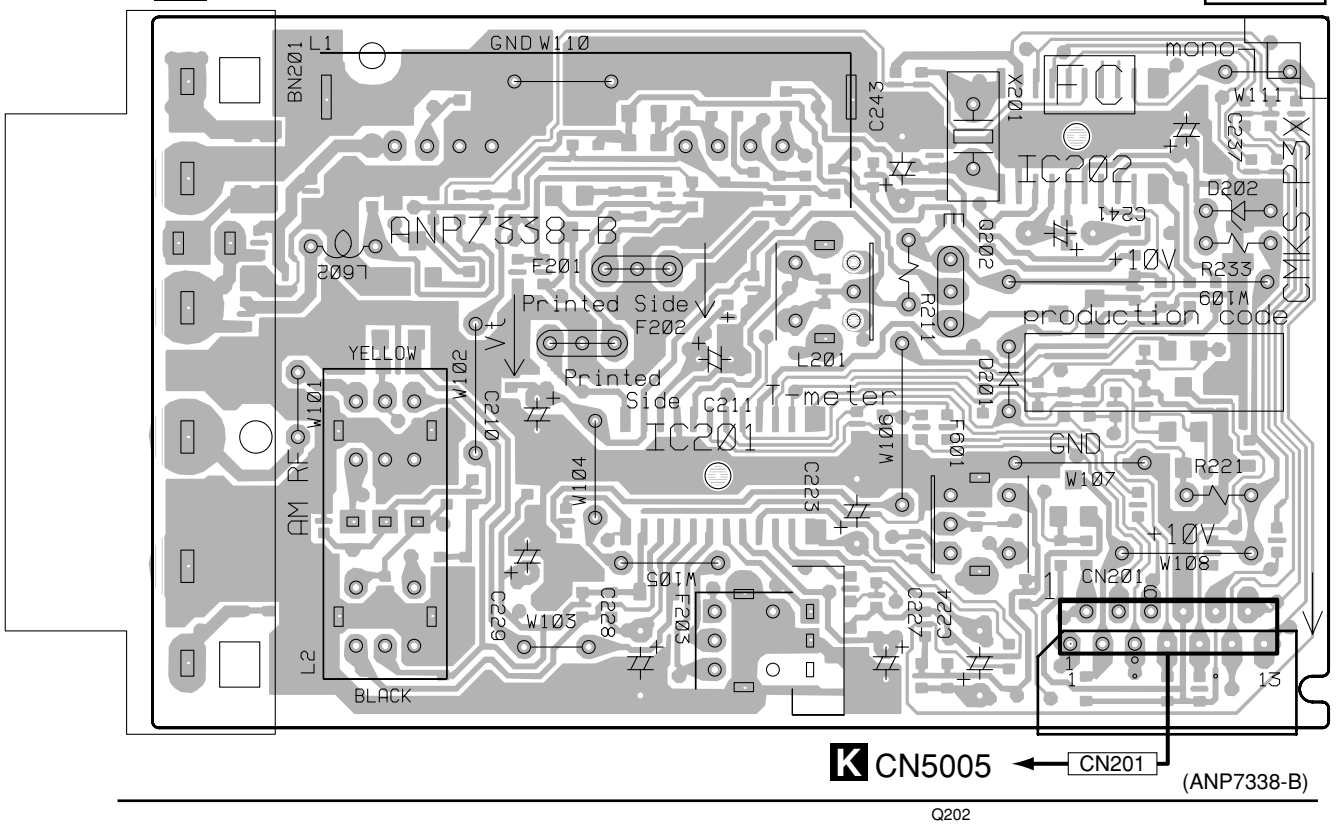
(XNP3052-B)

N S T V W N S T V W

4.8 FM/AM TUNER MODULE

SIDE A **SIDE B**

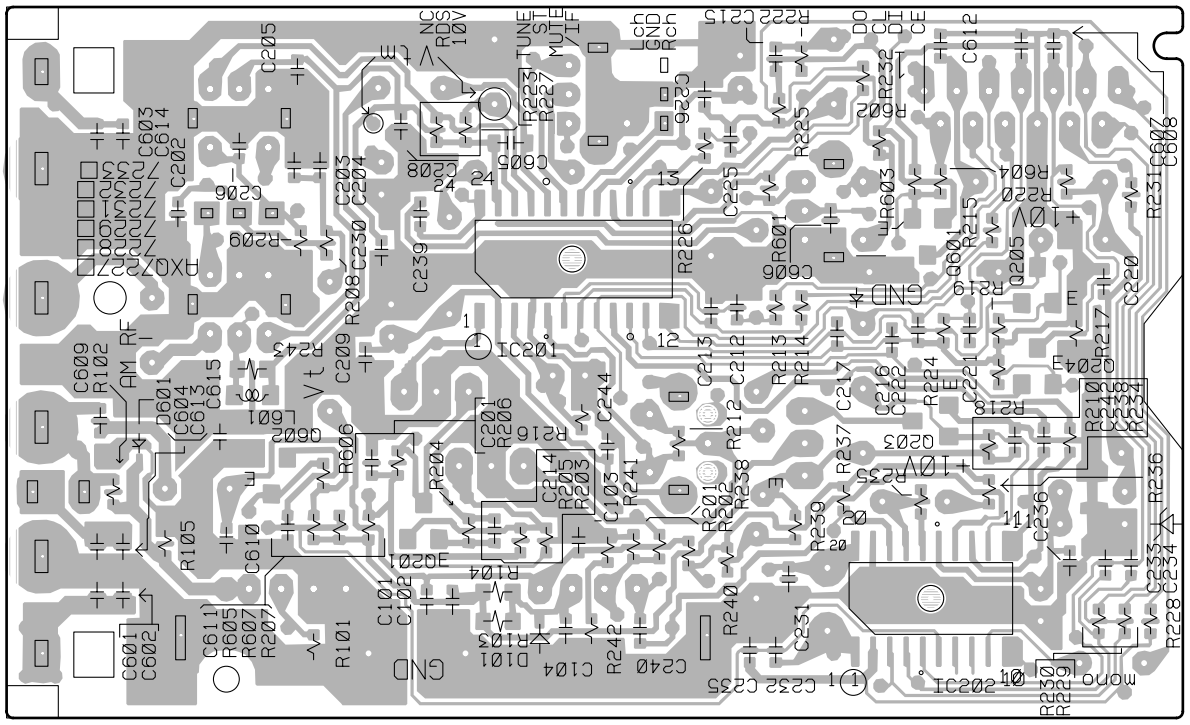
X FM/AM TUNER MODULE **SIDE A**



K CN5005 ← CN201 (ANP7338-B)

Q202

X FM/AM TUNER MODULE **SIDE B**



(ANP7338-B)

Q201 IC201 Q203 IC202 Q205 Q204

X **X**

5. PCB PARTS LIST

NOTES: ● *Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.*
● *The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.*
● *When ordering resistors, first convert resistance values into code form as shown in the following examples.*
Ex.1 When there are 2 effective digits (any digit apart from 0), such as 560 ohm and 47k ohm (tolerance is shown by J=5%, and K=10%).

560 Ω	→ *56 x 10¹* →	*561*	····· *RD1/4PU 5 6 1 J*
47k Ω	→ *47 x 10³* →	*473*	····· *RD1/4PU 4 7 3 J*
0.5 Ω	→ *R50*		····· *RN2H R 5 0 K*
1 Ω	→ *1R0*		····· *RS1P 1 R 0 K*

Ex.2 When there are 3 effective digits (such as in high precision metal film resistors).

5.62k Ω	→ *562 x 10¹* →	*5621*	····· *RN1/4PC 5 6 2 1 F*

LIST OF ASSEMBLIES

Mark	No.	Description	Part No.
	1	D.D & INPUT ASSY	XWX3049
NSP	1	AMP & PS ASSY	XWK3059
	2	AMP & PRIMARY ASSY	XWZ3539
	2	REGULATOR ASSY	XWZ3546
	2	AMP INPUT ASSY	XWZ3551
NSP	2	TRANS1 ASSY	XWZ3554
	2	TRANS2 ASSY	XWZ3559
NSP	2	TRANS3 ASSY	XWZ3562
	2	HASHIGETA ASSY	XWZ3568
	2	BOARD TO BOARD ASSY	XWZ3576
NSP	1	COMPLEX ASSY	XWK3046
	2	FRONT ASSY	XWZ3501
	2	6CH IN ASSY	XWZ3508
	2	POWER SW ASSY	XWZ3510
	2	H.P. ASSY	XWZ3513
	2	FRONT VIDEO ASSY	XWZ3515
	2	FRONT OPTICAL ASSY	XWZ3516
	2	DIGITAL IN ASSY	XWZ3519
	2	S. VIDEO ASSY	XWZ3522
	2	COMPORNENT ASSY	XWZ3524
	2	TRANS4 ASSY	XWZ3526
	2	KAWA ASSY	XWZ3529
	2	PRE-OUT ASSY	XWZ3530
	2	R. ENCODER ASSY	XWZ3582
	2	VIDEO ASSY	XWZ3583
	1	FM/AM TUNER MODULE	AXQ7231

COMPLEX ASSY

OTHERS

Mark	No.	Description	Part No.
		J 41 (JUMPER WIRED)	D15A04-100-2651
		J 42 (JUMPER WIRED)	D15A07-075-2651
		J 47 (JUMPER WIRED)	D20PYY0630E

AMP & PS ASSY

OTHERS

Mark	No.	Description	Part No.
		Y 701 (AWG14 BOARD IN)	ADX7286
		J 21 (JUMPER WIRED)	D20PYY0715E

A D.D & INPUT ASSY

SEMICONDUCTORS

Mark	No.	Description	Part No.
		IC9102	AK4382AVT
		IC9101	AK4586VQ
		IC112	BD3812F
		IC301	BU4094BCF
		IC9501	CS493292
		IC103	M62446FP
		IC9201	NJM2100M
		IC9812	NJM2391DL1-25
		IC9811	NJM2391DL1-33
		IC102	NJU7312AM
		IC9601	NJU7313AM
		IC9504	PD8097A
		IC9505	TC74LVX244FT
		IC9502, IC9503	TC74VHC574F
		IC9506	TC74VHCT244AFT
		IC9507	TC7WU04FU
		IC101	TC9273F-007
		IC104–IC107, IC110, IC9701–IC9707	UPC4570G2
		Q107–Q112, Q9201, Q9202	2SC3326
		Q9101, Q9204, Q9607, Q9609, Q9610	DTA124EK
		Q9102, Q9203, Q9608	DTC124EK
		D9601, D9602	1SS181
		D105, D106, D301, D9921	1SS355
		D107, D108	DAN217
		D201, D202	RB501V-40
		D104	UDZS5.1B
		D101, D102	UDZS6.8B

COILS AND FILTERS

Mark	No.	Description	Part No.
		L9101, L9501, L9504, L9811, L9812	ATL7002
		L111–L114, L1601, L1602	QTL1013
		L9102–L9104, L9502, L9503	QTL1013
		L9506, L9507	QTL1013

CAPACITORS

Mark	No.	Description	Part No.
		C9510, C9511	CCSRCH100D50
		C101–C114, C121–C123	CCSRCH101J50
		C126–C128, C152–C154	CCSRCH101J50
		C158, C159, C197, C198	CCSRCH101J50
		C207, C208, C221, C222	CCSRCH101J50
		C228, C229, C9160, C9201, C9202	CCSRCH101J50
		C9101, C9102	CCSRCH220J50
		C235, C241, C9117, C9749, C9751	CCSRCH221J50
		C9509, C9757	CCSRCH271J50
		C9530, C9731, C9735	CCSRCH331J50
		C9103, C9110, C9111, C9114, C9125	CCSRCH471J50
		C9503, C9505, C9507, C9513, C9515	CCSRCH471J50
		C9518, C9520, C9522, C9525, C9528	CCSRCH471J50
		C9571, C9611–C9614, C9625, C9639	CCSRCH471J50
		C9729, C9815, C9816	CCSRCH471J50
		C9707, C9708, C9721, C9722	CCSRCH820J50
		C130–C137, C146–C151, C202	CEAT100M50
		C261, C305, C9207, C9208, C9523	CEAT100M50
		C9526	CEAT100M50
		C9105, C9106, C9108, C9116, C9122	CEAT101M10

Mark	No.	Description	Part No.
	C9516, C9551, C9792, C9812, C9814		CEAT101M10
	C9740		CEAT220M25
	C9205		CEAT221M6R3
	C9112, C9529, C9769, C9770		CEAT2R2M50
	C9713, C9714, C9727, C9728, C9739		CEAT330M25
	C9753, C9765–C9768		CEAT330M25
	C144, C145		CEAT3R3M50
	C117, C118, C225, C226		CEAT470M50
	C232, C233, C239, C244		CEAT470M50
	C155, C156		CEAT471M10
	C115, C116, C234, C240		CEAT4R7M50
	C9203, C9204, C9615–C9618, C9761		CEAT4R7M50
	C9811, C9813		CEAT4R7M50
	C271, C9703, C9704, C9717, C9718		CKSRYB102K50
	C9745, C9781		CKSRYB102K50
	C119, C120, C124, C125, C138		CKSRYB103K50
	C141, C171, C172, C179, C180		CKSRYB103K50
	C183, C199, C203, C204		CKSRYB103K50
	C223, C224, C230, C231		CKSRYB103K50
	C237, C238, C242, C243, C304		CKSRYB103K50
	C9104, C9107, C9109, C9121		CKSRYB103K50
	C9123, C9124, C9209, C9502, C9504		CKSRYB103K50
	C9506, C9508, C9512, C9514, C9517		CKSRYB103K50
	C9519, C9521, C9524, C9527, C9531		CKSRYB103K50
	C9584, C9636, C9637, C9705, C9706		CKSRYB103K50
	C9709–C9712, C9723–C9726		CKSRYB103K50
	C9737, C9738, C9817		CKSRYB103K50
	C140, C143, C1631, C1632		CKSRYB104K16
	C173, C174, C9113, C9115, C9126		CKSRYB104K16
	C9206, C9818		CKSRYB104K16
	C9755		CKSRYB122K50
	C9701, C9702, C9715, C9716, C9763		CKSRYB222K50
	C9736		CKSRYB223K25
	C139, C142, C9626		CKSRYB223K50
	C236		CKSRYB472K50
	C184, C185, C9732		CKSRYB473K25
	C227, C9730		CKSRYF104Z25

RESISTORS

Mark	No.	Description	Part No.
⚠	R171, R172		RS1/16S102J
	R9104		RS1/16S1802F
⚠	R174, R175		RS1LMF101J
	Other Resistors		RS1/16S###J

OTHERS

Mark	No.	Description	Part No.
	CN9101 (7P CONNECTOR)		52044-0745
	CN104 (9P CONNECTOR)		52044-0945
	CN106 (20P CONNECTOR)		52045-1945
	CN102 (28P CONNECTOR)		52045-2845
	JA101–JA104 (PIN JACK(4P))		AKB7048
	CN107 (CONNECTOR POST)		B3B-PH-K
	CN101 (16P SOCKET)		KP200TA16L
	CN105 (8P SOCKET)		KP200TA8L
	101–103 (PCB BINDER)		VEF1040
	X9501 (CRYSTAL RESONATOR) (27.0MHZ)		VSS1086
	X9101 (CRYSTAL RESONATOR) (12.288MHZ)		VSS1140

B AMP & PRIMARY ASSY

SEMICONDUCTORS

Mark	No.	Description	Part No.
⚠	IC603 (PROTECTOR(1A))		AEK7009
⚠	IC701, IC702 (PROTECTOR(125mA))		AEK7020
⚠	IC604–IC607 (PROTECTOR(10A))		AEK7022
	IC51		NJM78M56FA
⚠	IC601, IC602		PAC011A
	Q703		2SA1145
	Q702		2SA1837
	Q696, Q697		2SC1740S
	Q704		2SC1845
	Q605, Q606, Q633, Q655, Q656		2SC2240
	Q683		2SC2240
	Q601–Q604, Q631, Q632		2SC2878
	Q651–Q654, Q681, Q682		2SC2878
	Q701		2SC4793
	Q51		KRC101M
	D56, D601, D603, D606, D608		1SS133
	D631, D632, D651–D654		1SS133
	D683, D684, D752, D754, D758		1SS133
⚠	D701, D702		D5SBA20(B)
	D602, D604, D681, D682		MTZJ16A
	D711		MTZJ22D
	D58		MTZJ5.1A
	D712		MTZJ5.1B
⚠	D51–D55, D721–D724		S5688G

COILS AND FILTERS

Mark	No.	Description	Part No.
⚠	L51		ATF7018
	L751–L754, L761, L762		ATH1004

SWITCHES AND RELAYS

Mark	No.	Description	Part No.
	RY751–RY754		XSR3002
⚠	RY51		XSR3003

CAPACITORS

Mark	No.	Description	Part No.
	C707, C708 (0.01/AC250V)		ACG1005
⚠	C51, C52 (10000pF/AC250V)		ACG7020
	C703, C704 (3300uF/42V)		ACH7135
	C701, C702 (4700uF/71V)		ACH7137
	C611–C614, C636, C637		CCPUCH6R8K50
	C661–C664, C686, C687		CCPUCH6R8K50
	C615, C616, C638, C665, C666		CEANP2R2M50
	C688		CEANP2R2M50
	C775, C776		CEANP470M50
	C712		CEAT101M10
	C609, C610, C635, C659, C660		CEAT101M16
	C685		CEAT101M16
	C711		CEAT101M35
	C53		CEAT102M16
	C697		CEAT221M10
	C54		CEAT470M25
	C605, C606, C633, C655, C656		CEAT4R7M50
	C683		CEAT4R7M50
	C705, C706		CEHAT100M2A
	C751, C752, C755, C761, C762		CFTYA104J50
	C771		CFTYA104J50
	C601, C602, C631, C651, C652		CKPUYB102K50
	C681, C696		CKPUYB102K50
	C603, C604, C632, C653, C654		CKPUYB331K50
	C682		CKPUYB331K50
	C55–C57		CKPUYF103Z25

RESISTORS

Mark	No.	Description	Part No.
⚠	R51 (2.2M/ 1/2W)		RCN1080
⚠	R52		RD1/2PM270J

Mark	No.	Description	Part No.
⚠	R615		RD1/4PU331J
⚠	R751, R752, R755, R761, R762		RD1/4PUF101J
⚠	R772		RD1/4PUF101J
⚠	R753, R754, R756, R763, R764		RS1LMF4R7J
⚠	R771		RS1LMF4R7J
⚠	R711		RS2LMF392J
⚠	R617, R622, R639, R667, R668		XCN3001
⚠	R691 (0.22/5W)		XCN3001
	Other Resistors		RD1/4PU###J

OTHERS

	CN604 (7P CONNECTOR)	52045-0745
	CN53 (23P CONNECTOR)	52045-2345
	CN702 (6P JUMPER CONNECTOR)	52147-0610
	CN751 (SPEAKER TERMINAL 8-P)	AKE7074
	CN753 (SPEAKER TERMINAL 6-P)	AKE7075
	CN752 (SPEAKER TERMINAL 4-P)	AKE7076
	51 (AC SOCKET 1-P)	AKP1060
	H51, H52, H701, H702 (FUSE CLIP)	AKR7001
⚠	T51 (STANDBY TRANSFORMER)	ATT7057
	CN601 (18P PLUG)	KM200TA18
	CN51 (AC CODE SOCKET)	RKP1751
	KN51, KN601 (EARTH METAL FITTING)	VNF1084
	701 (7P CABLE HOLDER)	XKP3047

C TRANS2 ASSY

SEMICONDUCTORS

⚠	IC853 (PROTECTOR (3A))	AEK7015
⚠	IC851, IC852 (PROTECTOR (4A))	AEK7018

OTHERS

	851 (7P CABLE HOLDER)	XKP3047

D TRANS3 ASSY

TRANS3 ASSY has no service part.

E REGULATOR ASSY

SEMICONDUCTORS

	IC803, IC804	NJM78M05FA
	IC801, IC805	NJM78M12FA
	IC802	NJM79M12FA
	Q801, Q803, Q805	KRA103M
	Q802, Q804, Q806	KRC102M
	D809, D810	MTZJ6.2A
⚠	D801–D804	S5688G

CAPACITORS

	C808, C811	CEAT101M10
	C805, C806, C813	CEAT101M16
	C801, C802	CEAT222M25
	C809	CEAT332M16
	C803, C804, C807, C810, C812	CKPUYF103Z25

OTHERS

	CN801 (23P CONNECTOR)	52045-2345
	CN804 (13P PLUG)	KM200TA13
	CN802 (16P PLUG)	KM200TA16
	CN803 (6P PLUG)	KM200TA6

F HASHIGETA ASSY

OTHERS

	CN1001, CN1002 (8P PLUG)	KM200TA8

Mark	No.	Description	Part No.

G BOARD TO BOARD ASSY

OTHERS

	CN392 (5P CONNECTOR)	52045-0545
	CN391 (11P PLUG)	KM200TA11
	CN390 (13P PLUG)	KM200TA13
	391 (PCB BINDER)	VEF1040

H AMP INPUT ASSY

SEMICONDUCTORS

	IC251	NJM4558D-D
	Q257	2SA933S
	Q251, Q256	2SC2878
	Q252	2SD1858X
	Q254	KRA103M
	Q253, Q255	KRC103M
	D251, D252	1SS133
	D253	MTZJ27D
	D254	MTZJ5.1B

CAPACITORS

	C251	CEANP470M25
	C254	CEAT101M25
	C252, C253	CKPUYF103Z25

RESISTORS

	All Resistors	RD1/4PU###J

OTHERS

	CN251 (3P CONNECTOR)	52044-0345
	CN254 (19P CONNECTOR)	52044-1945
	CN252 (3P PLUG)	KM250MA3L
	CN253 (18P SOCKET)	KP200TA18L

I TRANS1 ASSY

TRANS1 ASSY has no service part.

J DIGITAL IN ASSY

SEMICONDUCTORS

	IC1901	TC74ACT151F
	IC1902, IC1903	TC74HCU04AF

COILS AND FILTERS

	F1901–F1903	DTF1067
	L1904, L1905	QTL1013

CAPACITORS

	C1918	CCSRCH221J50
	C1907, C1914, C1928	CCSRCH271J50
	C1911, C1925	CCSRCH470J50
	C1916, C1926	CCSRCH471J50
	C1904, C1905, C1912	CEAT101M10
	C1915	CKSRYB102K50
	C1906, C1910, C1913, C1919, C1920	CKSRYB103K50
	C1923, C1929	CKSRYB103K50
	C1901–C1903, C1908, C1909	CKSRYB104K25
	C1921, C1922	CKSRYB104K25

RESISTORS

	All Resistors	RS1/16S###J

OTHERS

	CN1901 (7P CONNECTOR)	52045-0745
	CN1902 (CONNECTOR POST)	B5B-PH-K
	JA1904 (OPT. LINK OUT 12MB/S)	JFJ3000-010020
	JA1902, JA1903 (OPT. LINK IN 12MB/S)	JFJ4000-010020
	101 (PCB BINDER)	VEF1040

Mark	No.	Description	Part No.
		JA1901, JA1907 (1P PIN JACK)	VKB1077

K KAWA ASSY

SEMICONDUCTORS

	IC5001	BU4094BCF
	Q5001	2SC1740S
	Q5020–Q5022	DTC124EK
	Q5002	DTC143EK
	D5001, D5002	1SS355

COILS AND FILTERS

	L5001	QTL1013

CAPACITORS

	C5004–C5007	CCSRCH101J50
	C5012	CCSRCH471J50
	C5001, C5002	CEAT100M50
	C5003	CEAT101M16
	C5009	CKSRYB103K50
	C5011	CKSRYB104K16
	C5010	CKSRYF105Z10

RESISTORS

	All Resistors	RS1/16S###J

OTHERS

	CN5004 (7P CONNECTOR)	52044-0745
	CN5005 (13P CONNECTOR)	52044-1345
	CN5001 (17P CONNECTOR)	52044-1745
	CN5002 (13P SOCKET)	KP200TA13L
	CN5003 (8P SOCKET)	KP200TA8L
	5001 (SCREW PLATE)	VNE1948

L VIDEO ASSY

SEMICONDUCTORS

	IC301	NJM2296M
	Q302	2SA1515
	Q303	2SC3326
	Q301	2SC3377
	D301, D302, D305, D306	1SS355
	D303, D304	UDZS6.2B

CAPACITORS

	C347	CCSRCH470J50
	C307–C310, C312, C314, C338	CEAT470M25
	C1360, C302	CKSRYB103K50
	C339, C340	CKSRYB104K25
	C304–C306	CKSRYB221K50
	C333	CKSRYB331K50
	C311, C313	CKSRYB473K25

RESISTORS

⚠	R313, R316	RS3LMF390J
	Other Resistors	RS1/16S###J

OTHERS

	CN303 (7P CONNECTOR)	52044-0745
	CN305 (6P PIN JACK)	AKB7123
	CN301 (13P SOCKET)	KP200TA13L
	CN302 (6P SOCKET)	KP200TA6L

M 6CH IN ASSY

SEMICONDUCTORS

	IC302–IC305	NJM4558MD

Mark	No.	Description	Part No.

CAPACITORS

	C1354, C1359, C319, C320	CCSRCH101J50
	C327, C328, C342–C345	CCSRCH101J50
	C348, C349	CCSRCH101J50
	C1362	CCSRCH121J50
	C1361	CCSRCH680J50
	C1357	CEAT220M25
	C1358, C321, C324, C331, C332	CEAT4R7M50
	C1352, C1353, C1355, C1356, C316	CKSRYB103K50
	C322, C323, C329, C330	CKSRYB103K50
	C1350, C1351, C317, C318	CKSRYB221K50
	C325, C326	CKSRYB221K50

RESISTORS

	All Resistors	RS1/16S###J

OTHERS

	CN307 (9P CONNECTOR)	52044-0945
	308 (6P PIN JACK)	AKB7089

N S.VIDEO ASSY

SEMICONDUCTORS

	IC351, IC352	NJM2296M
	D351–D354	1SS355

CAPACITORS

	C375, C376	CCSRCH470J50
	C352, C355, C358, C361–C363	CEAT470M25
	C366	CEAT470M25
	C372, C373, C378	CKSRYB103K50
	C351, C353, C354, C356, C357	CKSRYB104K25
	C359, C367	CKSRYB104K25
	C364, C365, C368–C371	CKSRYB221K50

RESISTORS

	All Resistors	RS1/16S###J

OTHERS

	CN353 (2-4P MINI DIN SOCKET)	AKP7020
	CN352 (3-4P MINI DIN SOCKET)	AKP7043
	CN354 (CONNECTOR POST)	B5B-PH-K
	CN351 (11P SOCKET)	KP200TA11L
	JA351 (JACK)	RKN1004

O FRONT ASSY

SEMICONDUCTORS

	IC401	PDG268B
	Q401, Q402, Q442, Q471	DTA124EK
	Q403, Q441	DTC143EK
	D406, D410, D442	1SS355
	D403, D405	DAN217
	D401, D404	DAP202K
	D407, D408	RB501V-40

COILS AND FILTERS

	L401	LFEA2R2J

SWITCHES AND RELAYS

	S451–S468, S476	ASG1051

CAPACITORS

	C420 (220mF/35V)	ACH7101
	C404 (0.047F/5.5V)	ACH7132
	C511	CCSRCH471J50
	C442	CEAL470M10

Mark	No.	Description	Part No.
	C402		CEAT221M6R3
	C409, C410		CEAT2R2M50
	C412		CEAT470M50
	C405		CEAT471M6R3
	C451–C453, C472, C492, C495		CKSRYB102K50
	C401, C403, C411, C419, C441		CKSRYB103K50
	C531		CKSRYB103K50
	C408, C416, C418, C471		CKSRYB104K16
	C406, C407		CKSRYB473K16
RESISTORS			
	All Resistors		RS1/16S###J
OTHERS			
	471 (CABLE HOLDER (4P))		51063-0405
	404 (CABLE HOLDER (7P))		51063-0705
	CN401 (17P CONNECTOR)		52044-1745
	CN402 (28P CONNECTOR)		52044-2845
	V401 (FL TUBE)		XAV3013
	X401 (CERAMIC RESONATOR) (7.2MHz)		ASS7039
	401 (REMOTE RECEIVERUNIT)		GP1U27X

P R.ENCODER ASSY

SEMICONDUCTORS		
	D512	SLI-343DCW(STU)
	D511	UDZS5.6B
SWITCHES AND RELAYS		
	S511	ASG1051
	S513 (ROTARY ENCODER)	XSX3005
	S512 (ROTARY ENCODER)	XSX3006
RESISTORS		
	All Resistors	RS1/16S###J
OTHERS		
	511 (CABLE HOLDER (7P))	51063-0705
	512 (LED HOLDER)	XAK3187

Q POWER SW ASSY

SEMICONDUCTORS		
	D501	BR3371XJ30A
SWITCHES AND RELAYS		
	S501	ASG1051
RESISTORS		
	All Resistors	RS1/16S###J
OTHERS		
	501 (CABLE HOLDER (4P))	51063-0405

R TRANS4 ASSY

SEMICONDUCTORS		
⚠	IC891, IC892 (PROTECTOR (630mA))	AEK7006
⚠	D891	S1WB(A)60SD
CAPACITORS		
	C891, C892	CEAT471M35
OTHERS		
	CN891 (3P CONNECTOR)	52045-0345

S FRONT VIDEO ASSY

Mark	No.	Description	Part No.
CAPACITORS			
	C903, C905		CEAL470M25
	C908, C911, C914		CKSRYB103K50
	C904, C906, C909, C912		CKSRYB104K25
	C901, C902		CKSRYB221K50
	C907, C910, C913		CKSRYB471K50
RESISTORS			
	All Resistors		RS1/16S###J
OTHERS			
	JA902 (PIN JACK (4P))		AKX7014

T FRONT OPTICAL ASSY

CAPACITORS		
	C951	CKSRYB104K25
RESISTORS		
	All Resistors	RS1/16S###J
OTHERS		
	JA951 (OPT. LINK IN 12MB/S)	JFJ4000-010020
	CN951 (CONNECTOR)	S5B-PH-K
	KN951 (EARTH METAL FITTING)	VNF1084

U H.P. ASSY

SEMICONDUCTORS		
	Q1551, Q1552	2SC3326
CAPACITORS		
	C1554, C1557	CCSRCH471J50
	C1553, C1556	CKSRYB103K50
	C1555, C1558	CKSRYB104K16
	C1551, C1552	CKSRYB223K50
RESISTORS		
⚠	R1553, R1554	RS1LMF471J
⚠	R1551, R1552	RS2LMF331J
	Other Resistors	RS1/16S###J
OTHERS		
	1551 (6P CABLE HOLDER)	51048-0600
	JA1551 (HEADPHONE JACK)	RKB1014
	KN1551 (EARTH METAL FITTING)	VNF1084

V COMPORNENT ASSY

SEMICONDUCTORS		
	IC551	TC74HC4053AF
	IC552, IC553	TK15420M
CAPACITORS		
	C551–C554, C557, C558	CEAT101M10
	C555, C556, C559–C562, C566	CKSRYB103K50
	C568	CKSRYB103K50
RESISTORS		
	All Resistors	RS1/16S###J
OTHERS		
	CN551 (5P CONNECTOR)	52045-0545
	JA553 (3P RCA PINJACK)	AKB7124
	JA551 (6P RCA PINJACK)	AKB7128

W PRE-OUT ASSY

CAPACITORS		
	C1581	CKSRYB103K50
RESISTORS		

Mark	No.	Description	Part No.
		All Resistors	RS1/16S### J

Mark	No.	Description	Part No.
		AM RF TUNING BLOCK	AXX7071

OTHERS

CN1575 (7P CONNECTOR)	52045-0745
1575 (PIN JACK(6P))	AKB7089

X FM/AM TUNER MODULE

SEMICONDUCTORS

IC201	BA1451F
IC202	LC72131MD
Q201, Q204, Q205	2SC2412K
Q202	DTA124ES
Q203	DTC124EK
D201	1SS133
D202	MTZJ5.1C

COILS AND FILTERS

L201 (FM DETECTOR COIL)	ATE7003
F202 (CERAMIC FILTER)	ATF-107
F201 (CERAMIC FILTER)	ATF-119
F203 (AM CERAMIC FILTER)	ATF7026

CAPACITORS

C206	CCSRCH100D50
C212, C213, C226, C233–C235	CCSRCH101J50
C240	CCSRCH101J50
C231, C232	CCSRCH150J50
C223	CEAT100M50
C229	CEAT101M10
C224	CEAT1R0M50
C227	CEAT220M25
C241	CEAT2R2M50
C243	CEAT330M16
C228	CEAT3R3M50
C237	CEAT470M10
C211	CEJA1R0M50
C210	CEJA470M16
C204, C238, C602	CKSRYB102K50
C101, C102, C208, C220, C239	CKSRYB103K50
C242, C601	CKSRYB103K50
C216, C217, C225	CKSRYB153K50
C201, C205, C209, C214, C230	CKSRYB223K50
C236, C603	CKSRYB223K50
C221	CKSRYB224K10
C202, C222	CKSRYB473K16
C215	CKSRYB681K50

RESISTORS

R211	RD1/4PU221J
R221	RD1/4PU222J
R233	RD1/4PU391J
R243	RS1/10S0R0J
R103	RS1/10S331J
R104	RS1/10S391J
Other Resistors	RS1/16S###J

OTHERS

CN201 (13P CONNECTOR)	52044-1345
BN201 (TERMINAL 4-P)	AKA7003
(SHIELD CASE T)	ANK7072
(SHIELD CASE B)	ANK7073
X201 (CRYSTAL RESONATOR) (7.2MHz)	ASS1093
FM FRONTEND	AXF7003

6. ADJUSTMENT
6.1 TUNER SECTION

■ AM Tuner Section
• There is no adjustment in the AM tuner.

■ FM Tuner Section
• Set the mode selector to FM BAND.
• Connect the wiring as shown in Fig. 1.

Step No.	Adjustment Title	ANT. Input level and signal condition			Adjustment	
		Frequency (MHz)	Modulation	Input Level (dBμV)	Adjust point	Contents
1	T-METER Adjustment	98	OFF	80	L201	Adjust L201 so that the DC voltage between Pin 21 and Pin 23 of IC201 (Test point Vtm) gets within 0 ± 50mV.

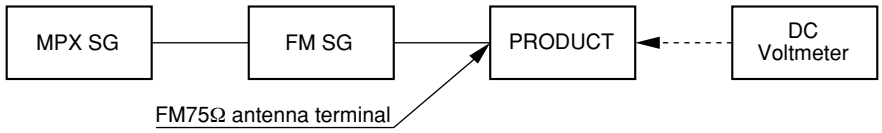


Fig.1 Adjustment Wiring Diagram

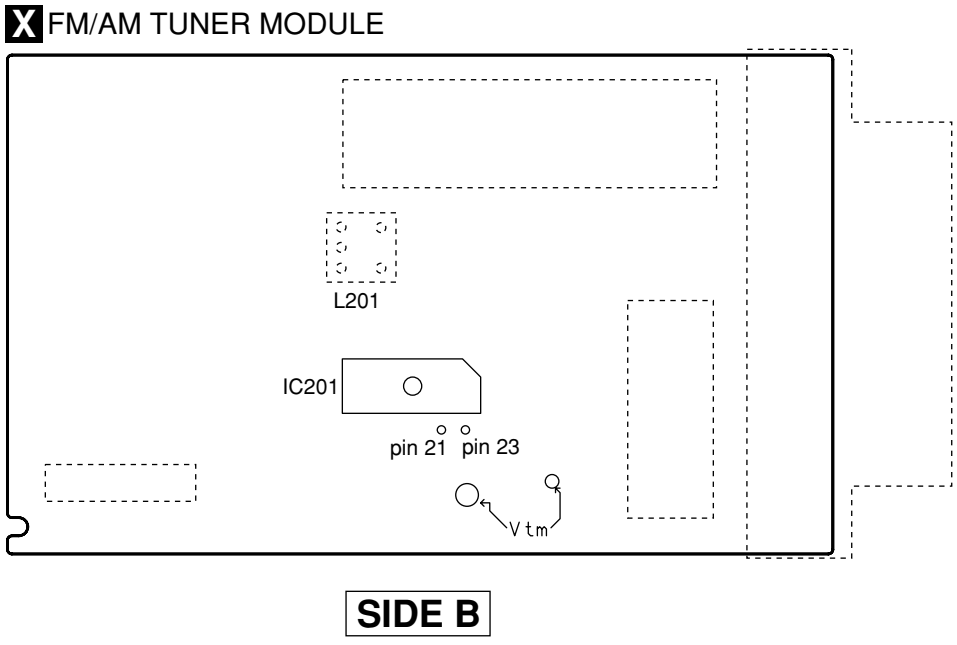
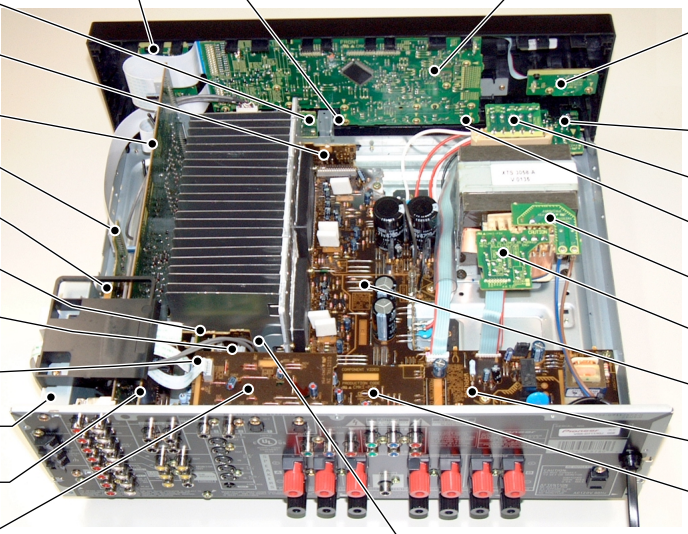


Fig.2 Adjustment Point

7. GENERAL INFORMATION
7.1 PCB LACATION



NOTE : This photograph is VSX-D711.

Note : D.D & INPUT Assy
The pin of function IC (IC101 TC9273F-007) can be checked from side-A by the through-hole round.
The pin No. is printed on the side-A.

Even if the FM/AM TUNER MODULE is disconnected, other functions can operate.

7.2 PARTS
7.2.1 IC

• The information shown in the list is basic information and may not correspond exactly to that shown in the schematic diagrams.

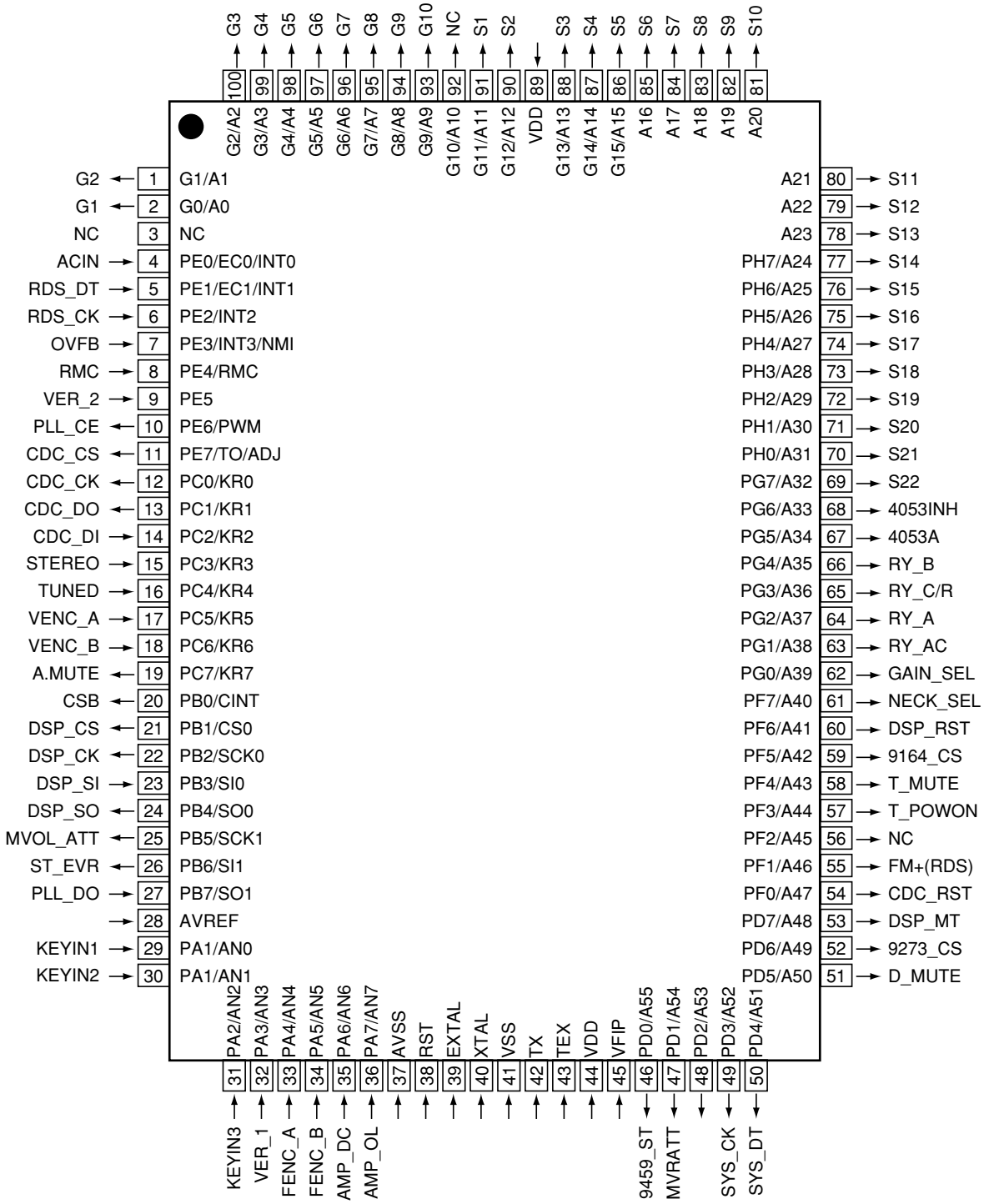
• **List of IC**

PDG268A, AK4586VQ, BD3812F, NJU7312AM, PD8097A, AK4382AVT

■ PDG268B (FRONT ASSY : IC401)

• **System Control MCU**

■ Pin Arrangement (Top View)



• Pin Function

No.	Pin Name	I/O	Pin Function	Active
1	G2	O	Grid output 2	H
2	G1	O	Grid output 1	H
3	NC	–	Connect to Vdd	
4	ACIN	I	Input AC pulse	
5	RDS_DT	I	Serial control DATA signal of RDS communication	
6	RDS_CK	I	Serial control CLOCK signal of RDS communication (Use external interrupt)	
7	DIRLOCK	I	ERR/OVER input from CODEC	
8	RMC	I	Remote control signal input (no-carrier signal)	
9	VER_2	I	Destination switch 2	
10	ST_EVR	O	Strobe of communication for E-volume	H
11	CDC_CS	O	Chip serect for CODEC	
12	CDC_CK	O	Control clock for CODEC & TC9164	
13	CDC_DO	O	Control data for CODEC & TC9164	
14	CDC DI	I	Data input from DIR	
15	STEREO	I	Signal to switch Stereo / Monoral	
16	TUNED	I	Condition of TUNED	
17	VENC_A	I	Input from rotary encoder of E-volume (A)	
18	VENC_B	I	Input from rotary encoder of E-volume (B)	
19	HP ON	I	Headphone detect	L
20	CREQ	I	Request for DSP	L
21	CCS	O	Chip select for DSP	L
22	CCK	O	Clock signal for DSP	H
23	CDT	I	DATA input signal for DSP	
24	CSDO	O	DATA output signal for DSP	H
25	FS 96	I	96 k	H
26	AMP_OL	I	Detect overload of protection circuit (L: overload)	H
27	PLL_DO	I	Data input signal for communication with LC72131 (Tuner)	
28	AVref	–	Connect to Vdd	
29	KEYIN1	I	Key input A/D conversion port 1	
30	KEYIN2	I	Key input A/D conversion port 2	
31	KEYIN3	I	Key input A/D conversion port 3	
32	VER_1	I	Input 1 to switch region (A/D input)	
33	FENC_A	I	FUNC Rotary encoder signal input (A)	
34	FENC_B	I	FUNC Rotary encoder signal input (B)	
35	AMP_DC	I	Detect trouble DC of protection circuit (L : Trouble)	L
36	VER_2	I	Input 2 to switch region (A/D input)	L
37	AVSS	–	Connect to Vss	
38	RST	–	Reset	
39	EXTAL	–	Connect to the oscillator (7.2MHz)	
40	XTAL	–		
41	VSS	–	Connect to Vss	
42	TX	–	NC	
43	TEX	–	Connect to Vss	
44	VDD	–	+5V	
45	VFDP	–	-30V	
46	9459_ST	O	Strobe for E-volume (TC9459) of SB	
47	MVRATT	O	ATT control of master volume for E-volume (less than -15dB : L)	H
48				H
49	SYS_DT	O	Data signal for communication with M62446, TC9163, TC9164 and PLL	H
50	SYS_CK	O	Clock signal for communication with M62446, TC9163, TC9164 and PLL	H

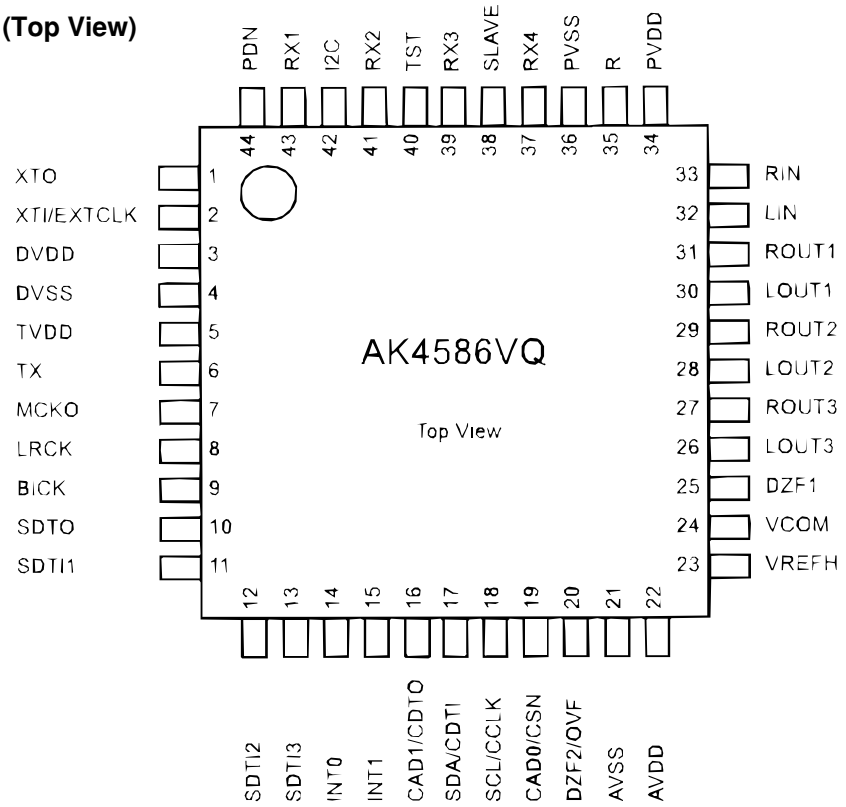
• **Pin Function**

No.	Pin Name	I/O	Pin Function	Active
51	9273_CS	O	Chip select for TC9273	H
52	DSP_MT	O	DSP Mute (ASSY mute)	H
53	GAIN_SEL	O	Gain select (5.1ch and Stereo of analog input : H)	H
54	AMUTE	O	Audio mute	H
55	T_MUTE	O	Tuner mute	H
56	PLL_CE	O	Chip select for communication to LC72131 (Tuner)	
57	NECK_SEL	O	5.1ch, surround mode and A+B Stereo : H / Stereo : L	H
58	FM+(RDS)	O	Tr switch ON/OFF for power supply of RDS decoder (L : AM, power OFF , H : Other)	H
59	9164_ CS	O	TC9163, TC9164 Chip select	
60	CRST	O	Reset for DSP	
61	CDC_PD	O	Power down for CODEC	
62	ABOT	O	Abort for DSP	H
63	RY_AC	O	AC relay ON/OFF	H
64	RY_A	O	Speaker A relay ON/OFF	H
65	RY_C/R	O	Rear/Center Speaker relay ON/OFF	H
66	EXP CS	O	Chip select for expand IC	H
67	EXP OE	O	Chip select for expand IC	H
68	RY_AC	O	AC relay ON/OFF control	H
69	S22	O	Segment output 22	H
70	S21		Segment output 21	
71	S20		Segment output 20	
72	S19		Segment output 19	
73	S18		Segment output 18	
74	S17		Segment output 17	
75	S16		Segment output 16	
76	S15		Segment output 15	
77	S14		Segment output 14	
78	S13		Segment output 13	
79	S12		Segment output 12	
80	S11		Segment output 11	
81	S10		Segment output 10	
82	S9		Segment output 9	
83	S8		Segment output 8	
84	S7		Segment output 7	
85	S6		Segment output 6	
86	S5		Segment output 5	
87	S4		Segment output 4	
88	S3		Segment output 3	
89	VDD	–	5V	
90	S2	O	Segment output 2	H
91	S1		Segment output 1	
92	Not used	O	Not used (Fixed Vfdp)	
93	G10	O	Grid output 10	H
94	G9		Grid output 9	
95	G8		Grid output 8	
96	G7		Grid output 7	
97	G6		Grid output 6	
98	G5		Grid output 5	
99	G4		Grid output 4	
100	G3		Grid output 3	

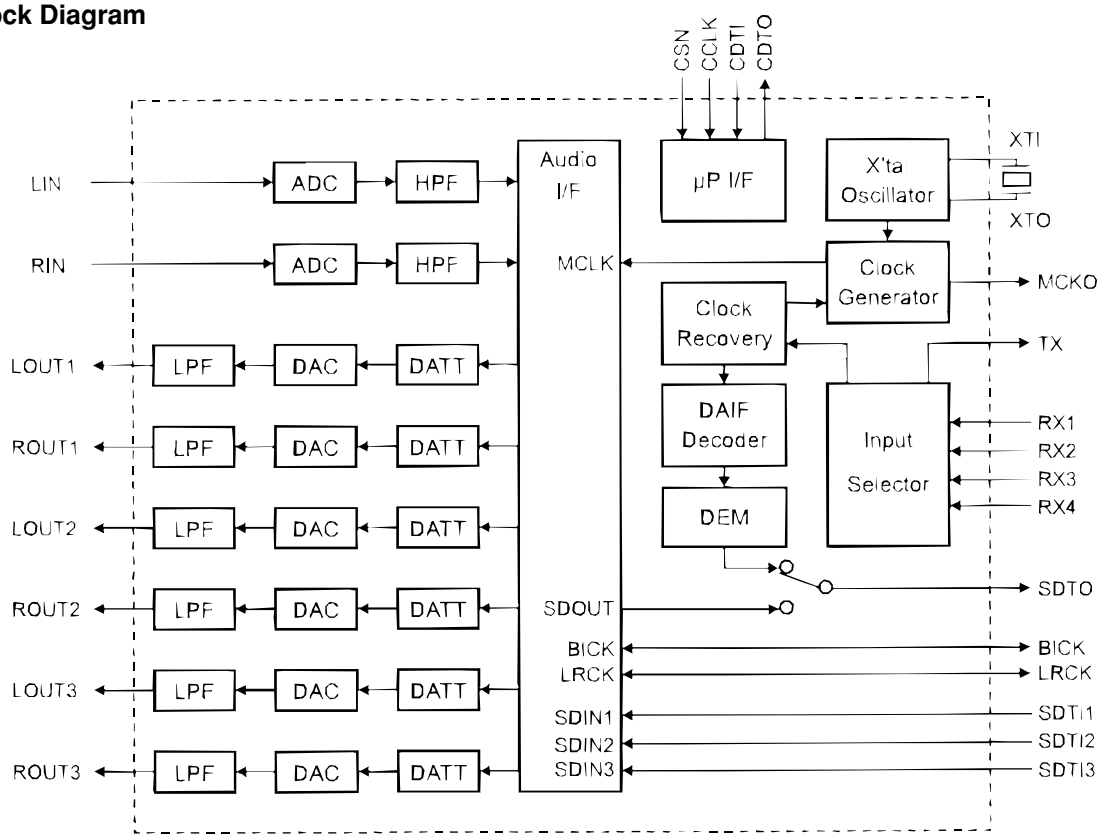
■ AK4586VQ (DD & INPUT ASSY : IC9101)

• 96kHz 24Bit 6-channel CODEC with DIR

■ Pin Arrangement (Top View)



■ Block Diagram



■ Pin / Function

PIN/FUNCTION

No.	Pin Name	I/O	Function
1	XTO	O	X'tal Output Pin
2	XTI	I	X'tal Input Pin
	EXTCLK	I	External Master Clock Input Pin
3	TVDD	-	Output Buffer Power Supply Pin, 2.7V~5.5V
4	DVSS	-	Digital Ground Pin, 0V
5	DVDD	-	Digital Power Supply Pin, 4.5V~5.5V
6	TX	O	Transmit channel (through data) Output Pin
7	MCKO	O	Master Clock Output Pin
8	LRCK	I/O	Input/Output Channel Clock Pin
9	BICK	I/O	Audio Serial Data Clock Pin
10	SDTO	O	Audio Serial Data Output Pin
11	SDTI1	I	DAC1 Audio Serial Data Input Pin
12	SDTI2	I	DAC2 Audio Serial Data Input Pin
13	SDTI3	I	DAC3 Audio Serial Data Input Pin
14	INT0	O	Interrupt 0 pin
15	INT1	O	Interrupt 1 pin
16	CDTO	O	Control Data Output Pin in 4-wire serial control mode
	CAD1	I	Chip Address 1 Pin in I^2C bus control mode
17	CDTI	I	Control Data Input Pin in 4-wire serial control mode
	SDA	I/O	Control Data Input/Output Pin in I^2C bus control mode
18	CCLK	I	Control Data Clock Pin in 4-wire serial control mode
	SCL	I	Control Data Clock Pin in I^2C bus control mode
19	CSN	I	Chip Select Pin in 4-wire serial control mode
	CAD0	I	Chip Address 0 Pin in I^2C bus control mode
20	DZF2	O	Zero Input Detect 2 Pin (Note 1) When the input data of the group 1 follow total 8192 LRCK cycles with "0" input data, this pin goes to "H".
	OVF	O	Analog Input Overflow Detect Pin (Note 2) This pin goes to "H" if the analog input of Lch or Rch is overflows.
21	AVSS	-	Analog Ground Pin, 0V
22	AVDD	-	Analog Power Supply Pin, 4.5V~5.5V

■ Pin / Function

No.	Pin Name	I/O	Function
23	VREFH	I	Positive Voltage Reference Input Pin, AVDD
24	VCOM	O	Common Voltage Output Pin, AVDD/2 Large external capacitor around 2.2μF is used to reduce power-supply noise.
25	DZF1	O	Zero Input Detect 1 Pin (Note 1) When the input data of the group 1 follow total 8192 LRCK cycles with "0" input data, this pin goes to "H".
26	LOUT3	O	DAC3 Lch Analog Output Pin
27	ROUT3	O	DAC3 Rch Analog Output Pin
28	LOUT2	O	DAC2 Lch Analog Output Pin
29	ROUT2	O	DAC2 Rch Analog Output Pin
30	LOUT1	O	DAC1 Lch Analog Output Pin
31	ROUT1	O	DAC1 Rch Analog Output Pin
32	LIN	I	Lch Analog Input Pin
33	RIN	I	Rch Analog Input Pin
34	PVDD	-	PLL Power Supply Pin, 4.5V~5.5V
35	R	-	External Resistor Pin 18kΩ +/-1% resistor to PVSS externally.
36	PVSS	-	PLL Ground Pin, 0V
37	RX4	I	Receiver Channel 4 Pin (Internal biased pin)
38	SLAVE	I	Slave Mode Pin "L": Master mode or Slave mode, "H": Slave mode
39	RX3	I	Receiver Channel 3 Pin (Internal biased pin)
40	TST	I	Test Pin This pin should be connected to DVSS.
41	RX2	I	Receiver Channel 2 Pin (Internal biased pin)
42	I2C	I	Control Mode Select Pin "L": 4-wire Serial, "H": I^2C Bus
43	RX1	I	Receiver Channel 1 Pin (Internal biased pin)
44	PDN	I	Power-Down & Reset Pin When "L", the AK4586 is powered-down, all output pins go to "L" and the control registers are reset to default state. If the state of CAD1-0 changes, then the AK4586 must be reset by PDN.

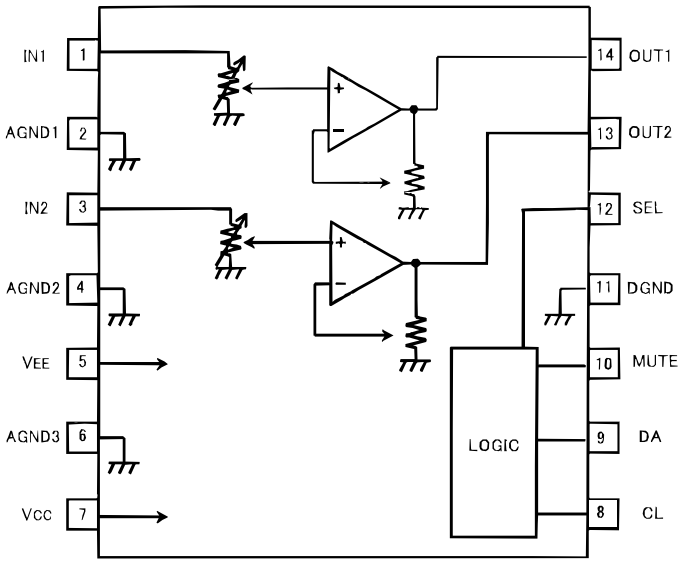
Notes:

1. The group 1 and 2 can be selected by DZFM2-0 bits.
2. This pin becomes OVF pin if OVFE bit is set to "1".
3. All input pins except internal biased pins should not be left floating.

■ BD3812F (D.D & INPUT ASSY : IC112)

• **Audio Sound Processor**

•Block Diagram



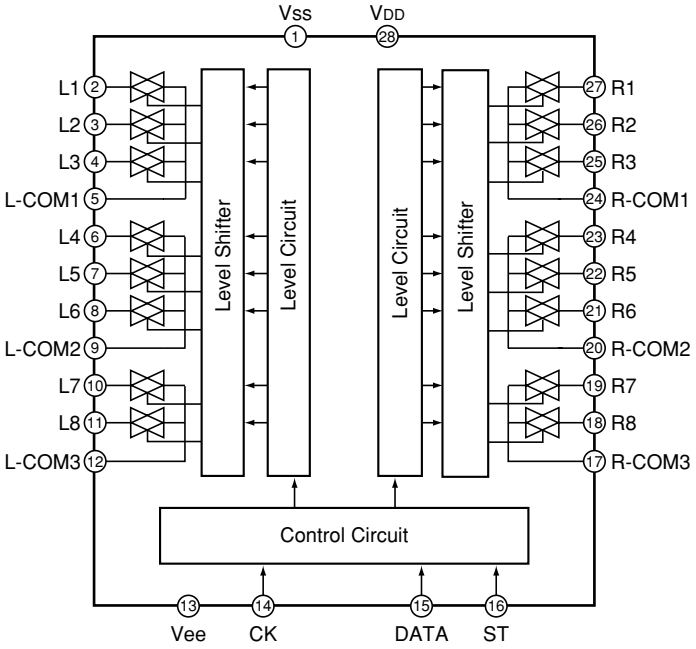
•Pin Function

No.	Pin Name	Function
1	IN1	1ch input terminal
2	AGND1	Analog ground terminal
3	IN2	2ch input terminal
4	AGND2	Analog ground terminal
5	Vee	(-) Power supply terminal
6	AGND3	Analog ground terminal
7	Vcc	(+) Power supply terminal
8	CL	Serial clock input terminal
9	DA	Serial data an latch input terminal
10	MUTE	Mute terminal
11	DGND	Ground terminal for comparator
12	SEL	Serial data select terminal
13	OUT2	2ch output terminal
14	OUT1	1ch output terminal

■ NJU7312AM (D.D & INPUT ASSY : IC102)

• **Analog Switch Array**

•Block Diagram



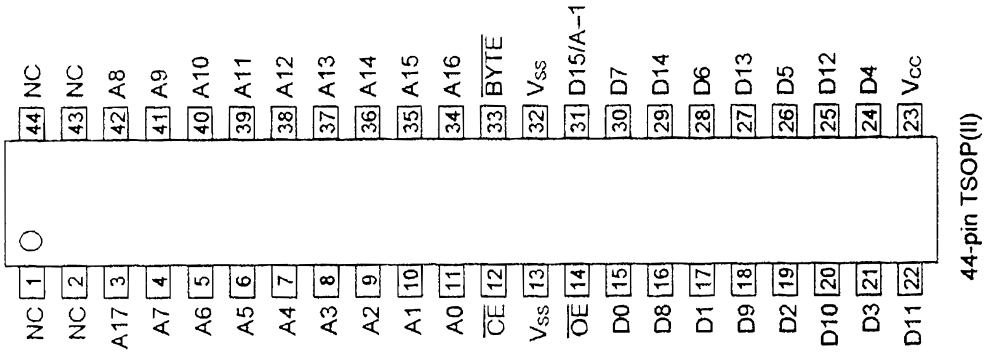
•Pin Function

No.	Pin Name	Function
1	VSS	Minus Power Supply
2, 27	L1,R1	Input and Output
3, 26	L2,R2	
4, 25	L3,R3	
5, 24	COM1	
6, 23	L4,R4	
7, 22	L5,R5	
8, 21	L6,R6	
9, 20	COM2	
10, 19	L7,R7	
21, 18	L8,R8	
26, 17	COM3	
13	GND	Digital Ground
14	CK	Clock Input
15	DATA	Data Input
16	ST	Strobe Input
28	VDD	Plus Power Supply

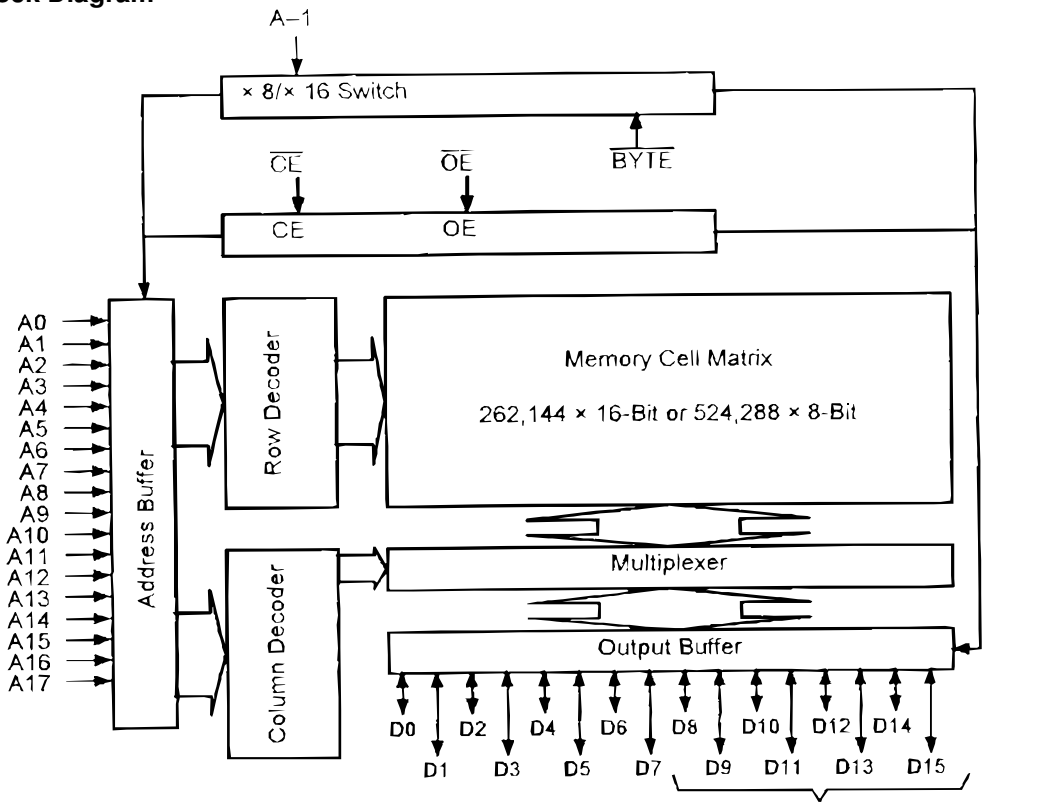
■ PD8097A (D.D & INPUT ASSY : IC9504)

• **4Mb P2ROM**

■ Pin Arrangement (Top View)



■ Block Diagram

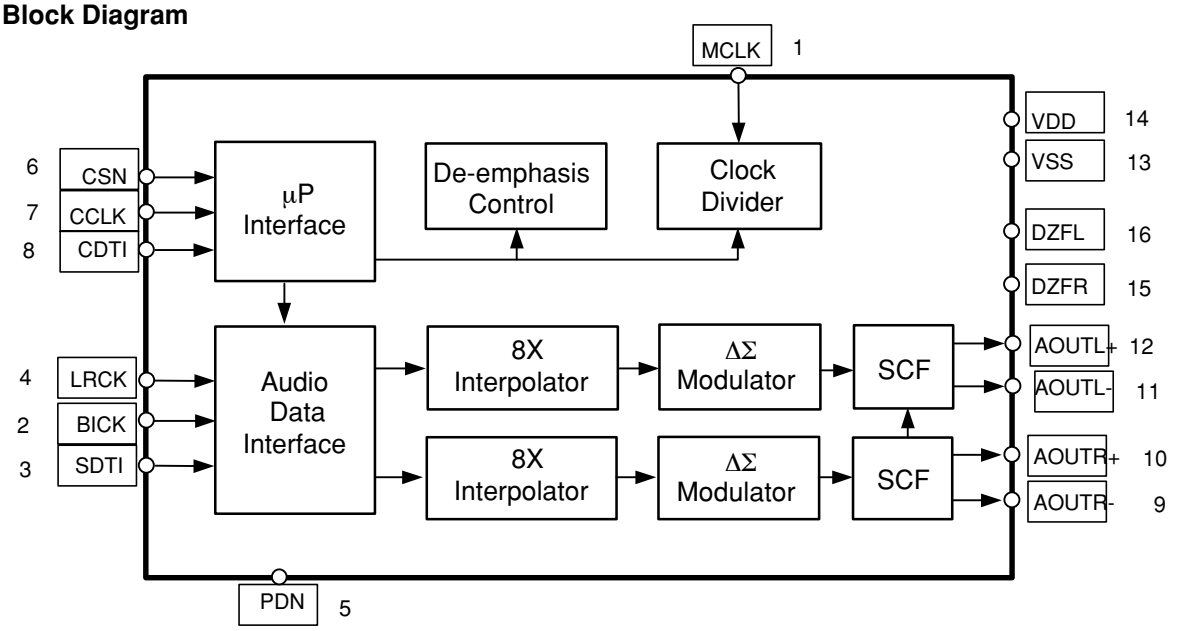


In 8-bit output mode, these pins are placed in a high-Z state and pin D15 functions as the A-1 address pin.

■ AK4382AVT (DD & INPUT ASSY : IC9102)

• D/A Converter IC

■ Block Diagram



■ Pin Function

Pin / Function

No.	Pin Name	I/O	Function
1	MCLK	I	Master Clock Input Pin An external TTL clock should be input on this pin.
2	BICK	I	Audio Serial Data Clock Pin
3	SDTI	I	Audio Serial Data Input Pin
4	LRCK	I	L/R Clock Pin
5	PDN	I	PowerDown Mode Pin When at "L", the AK4382 is in the power down mode and is held in reset. The AK4382 should always be reset upon power-up.
6	CSN	I	Chip Select Pin
7	CCLK	I	Control Data Input Pin
8	CDTI	I	Control Data Input Pin
9	AOUTR-	O	Rch Negative Analog Output Pin
10	AOUTR+	O	Rch Positive Analog Output Pin
11	AOUTL-	O	Lch Negative Analog Output Pin
12	AOUTL+	O	Lch Positive Analog Output Pin
13	VSS	-	Ground Pin
14	VDD	-	Power Supply Pin
15	DZFR	O	Rch Data Zero Input Detect Pin
16	DZFL	O	Lch Data Zero Input Detect Pin

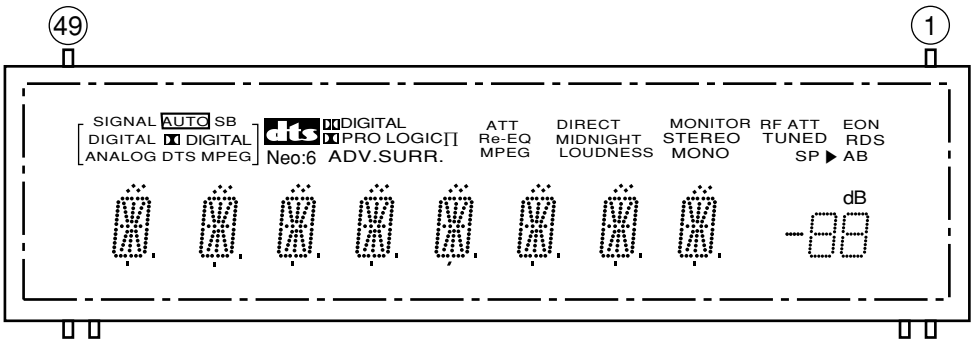
Note: All input pins should not be left floating.

7.2.2 DISPLAY

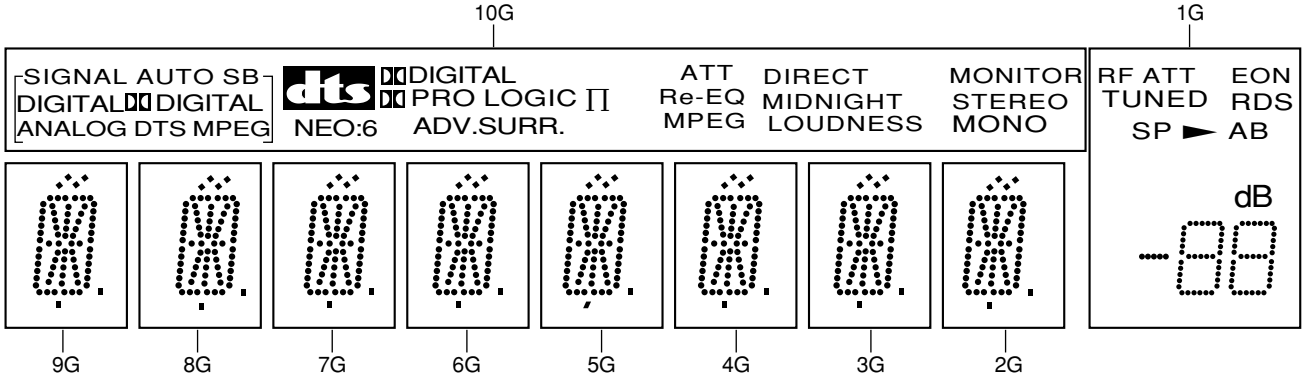
■ XAV3013 (FRONT ASSY : V401)

• FL DISPLAY

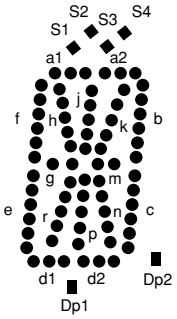
• Pin Assignment



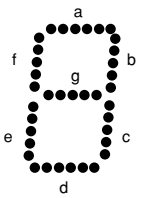
• Grid Assignment



• Segment Designation



(9G to 2G)



(1G)

• Pin Connection

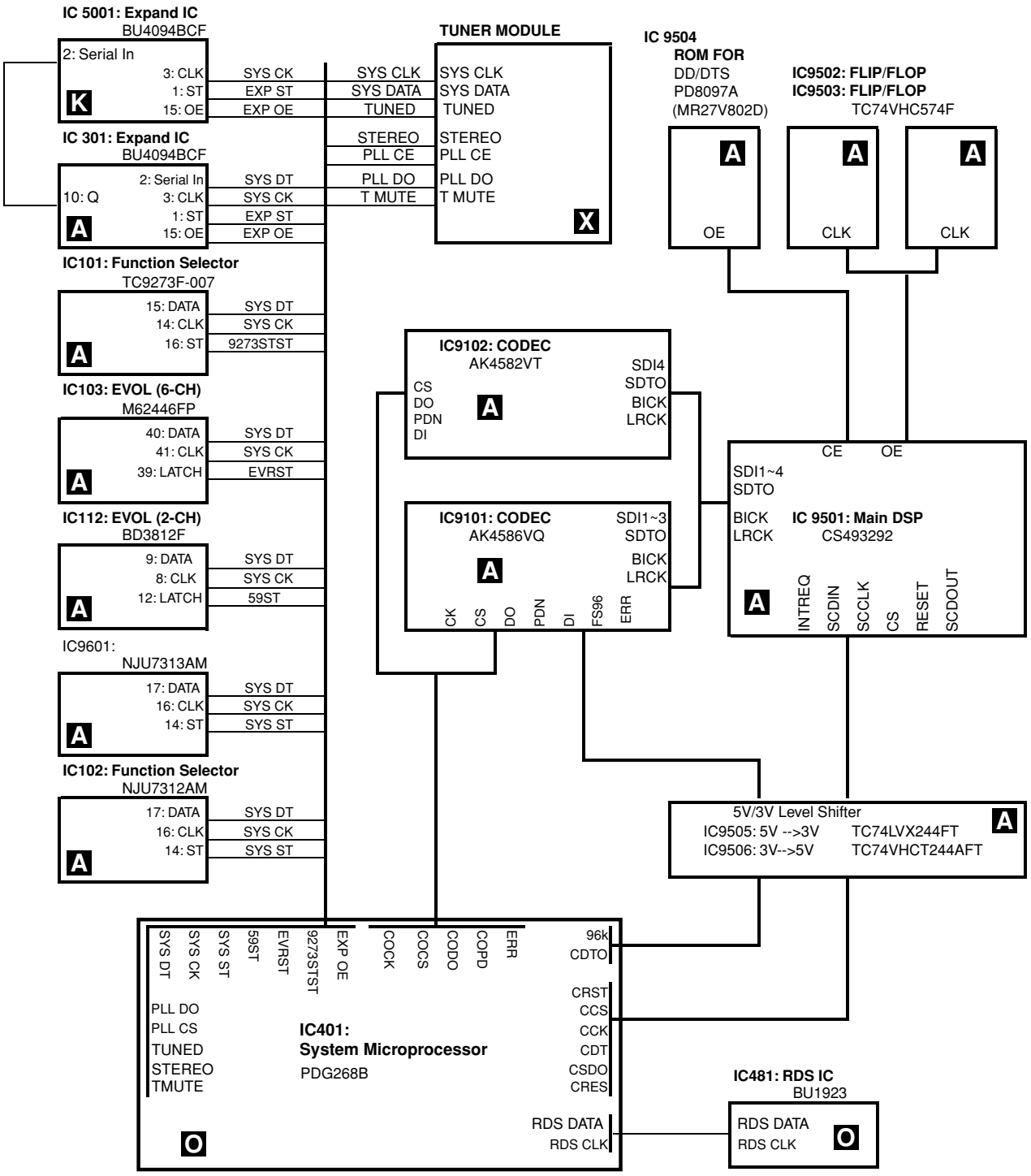
Pin No.	49	48	47	46	45	44	43	42	41	40	39	38	37	36	35	34	33	32	31	30	29	28	27	26	25
Connection	F2	F2	NP	NP	P22	P21	P20	P19	P18	P17	P16	P15	P14	P13	P12	P11	P10	P9	P8	P7	P6	P5	P4	P3	P2
Pin No.	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	
Connection	P1	NX	NX	NX	NX	NX	NX	NX	NX	NX	10G	9G	8G	7G	6G	5G	4G	3G	2G	1G	NP	NP	F1	F1	

NOTE 1) F1, F2..... Filament
2) NP..... No pin
3) NX..... No extend pin
4) DL..... Datum Line
5) 1G to 10G..... Grid
6) Field of vision is a minimum of 21.8° from the lower side.

• Anode Connection

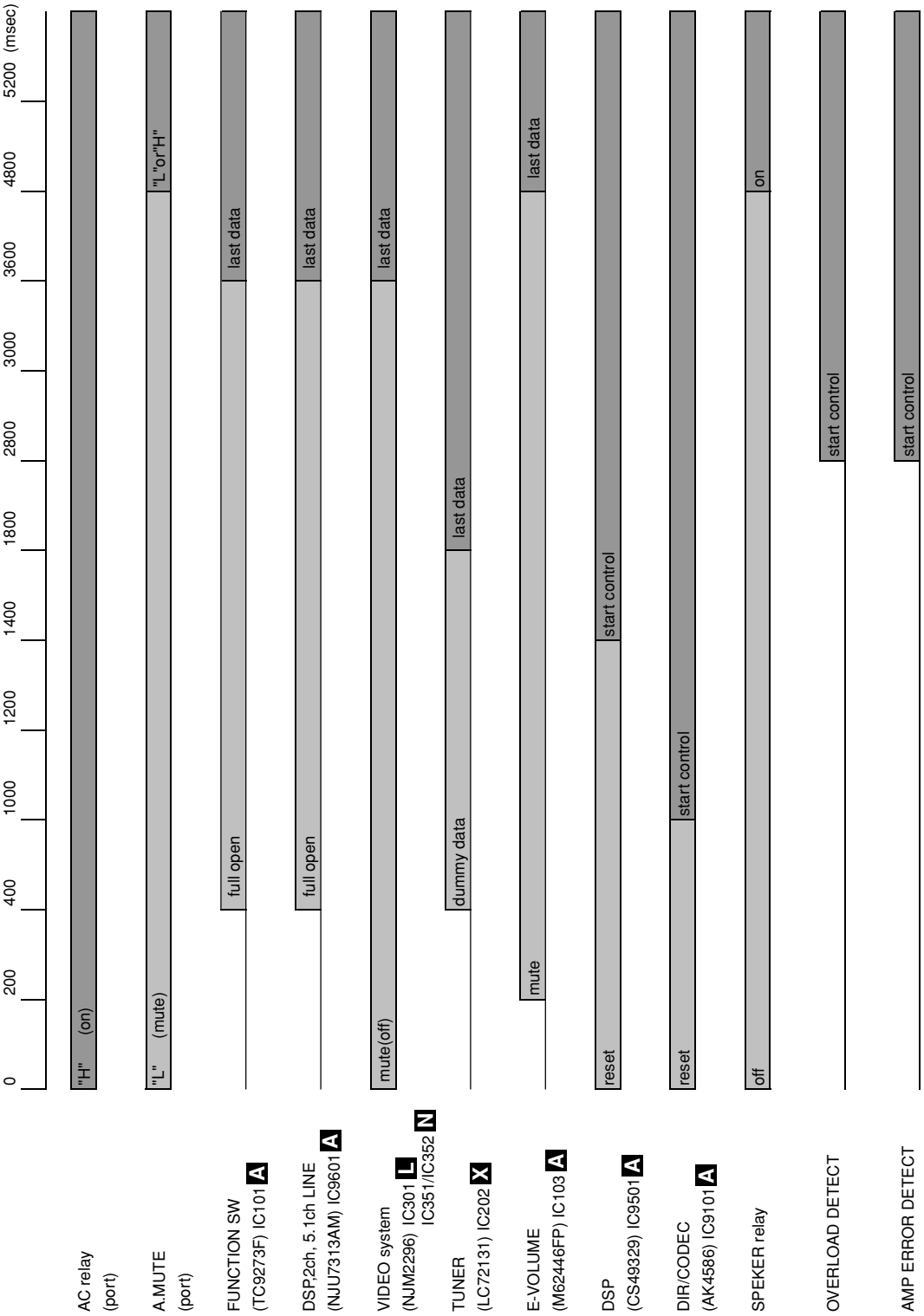
	10G	9G	8G	7G	6G	5G	4G	3G	2G	1G
P1	S1	a1	a1	a1	a1	a1	a1	a1	a1	RFATT
P2	AUTO	a2	a2	a2	a2	a2	a2	a2	a2	EON
P3	SB	h	h	h	h	h	h	h	h	○
P4	DIGITAL	j	j	j	j	j	j	j	j	TUNED
P5	ANALOG	k	k	k	k	k	k	k	k	RDS
P6	DIGITAL (L)	b	b	b	b	b	b	b	b	S1
P7	DTS	f	f	f	f	f	f	f	f	A
P8	MPEG	m	m	m	m	m	m	m	m	B
P9	dts	g	g	g	g	g	g	g	g	1a
P10	MPEG	c	c	c	c	c	c	c	c	1b
P11	DIGITAL (R)	e	e	e	e	e	e	e	e	1f
P12	PROLOGIC ∏	r	r	r	r	r	r	r	r	1g
P13	Neo:6	p	p	p	p	p	p	p	p	1c
P14	ATT	n	n	n	n	n	n	n	n	1e
P15	ADV.SURR.	d1	d1	d1	d1	d1	d1	d1	d1	1d
P16	Re-EQ	d2	d2	d2	d2	d2	d2	d2	d2	2a
P17	DIRECT	Dp2	Dp2	Dp2	Dp2	Dp2	Dp2	Dp2	Dp2	2b
P18	MIDNIGHT	Dp1	Dp1	Dp1	Dp1	Dp1	Dp1	Dp1	Dp1	2f
P19	LOUDNESS	S1	S1	S1	S1	S1	S1	S1	S1	2g
P20	MONITOR	S4	S4	S4	S4	S4	S4	S4	S4	2c
P21	STEREO	S2	S2	S2	S2	S2	S2	S2	S2	2e
P22	MONO	S3	S3	S3	S3	S3	S3	S3	S3	2d

7.3 EXPLANATION
7.3.1 U-COM BLOCK DIAGRAM

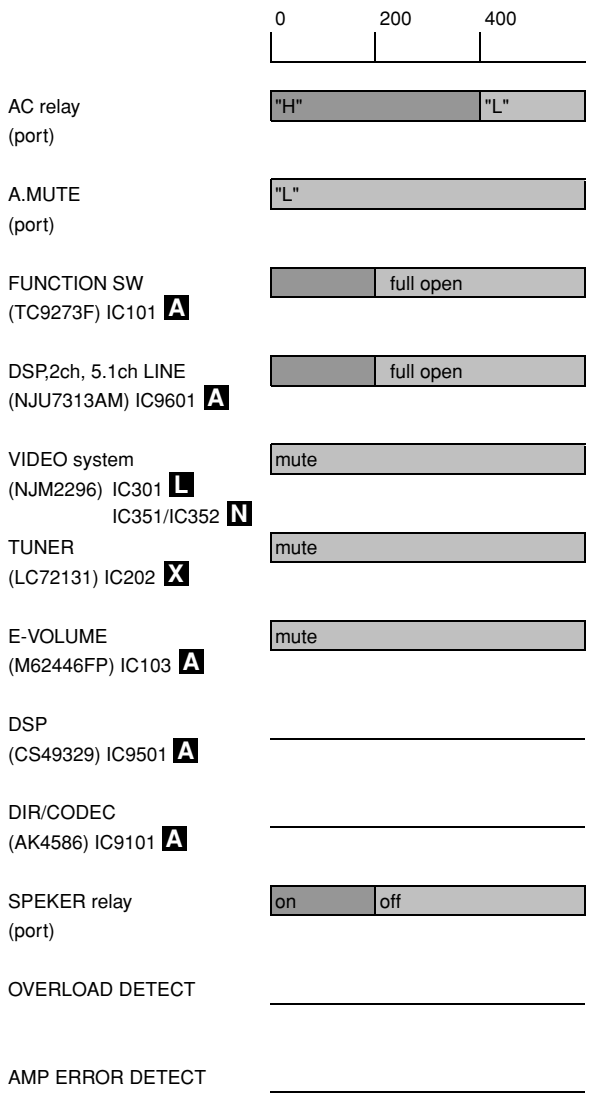


7.3.2 POWER ON AND OFF SEQUENCE

■ **POWER ON SEQUENCE**



■ POWER OFF SEQUENCE



7.3.3 PROTECTION CIRCUIT

1. DC abnormal detection

It processes more preferentially than overload detection.

When detected DC abnormal, A.MUTE* is on and speaker relay is off, then flash "AMP_ERR" on display.

*A.MUTE : Audio mute command

↓

An unusual state continues for 3 seconds.

↓ continuation

A power supply is shut off.

↓

The power key cannot be effective for 60 seconds

↓ return

A program is performed from the beginning.

If the AC plug is pulled off within 60 sec, and then it is plugged in again, the unit will be reset for 60 sec.

2. Overload detection

When detected overload, A.MUTE* is on and speaker relay is off, then flash "OVERLOAD" on display.

↓

An unusual state continues for 3 seconds.

↓ continuation

A power supply is shut off.

↓ return

A power supply is shut off even if it returns.

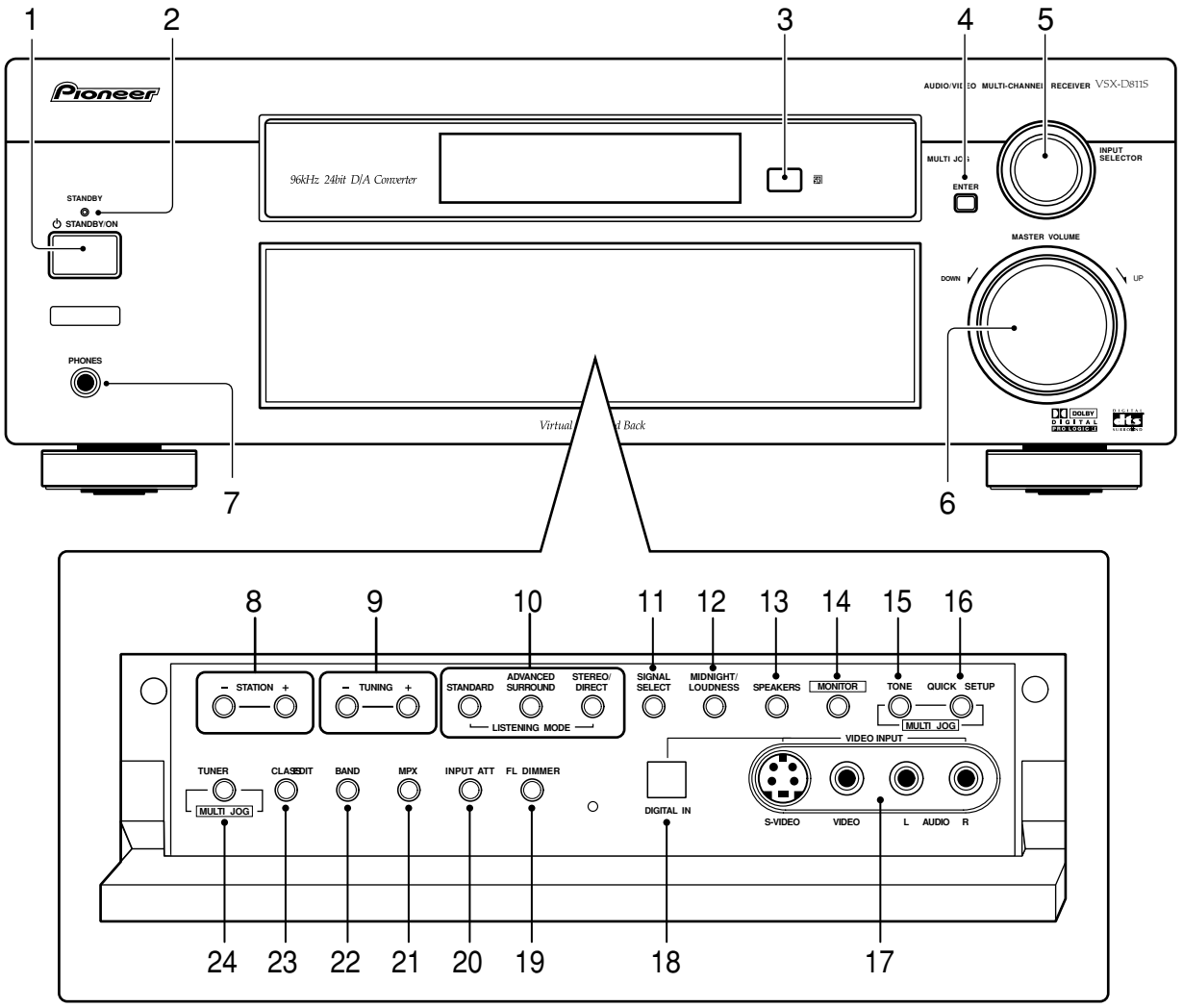
7.4 CLEANING

Before shipping out the product, be sure to clean the following positions by using the prescribed cleaning tools:

Position to be cleaned	Cleaning tools
Fans	Cleaning paper : GED-008

8. PANEL FACILITIES
8.1 PANEL FACILITIES

Front panel



1 ⏻ STANDBY/ON
Switches the receiver between on and standby.

2 STANDBY indicator
Lights when the receiver is in standby mode.

3 Remote sensor
Receives the signals from the remote control.

4 ENTER

5 MULTI JOG/INPUT SELECTOR dial
The MULTI JOG/INPUT SELECTOR dial performs a number of tasks. Use it to select options after pressing TONE CONTROL, QUICK SETUP or TUNER EDIT.

6 MASTER VOLUME

7 PHONES jack
Use to connect headphones. When the headphones are connected, there is no sound output from the speakers.

8 STATION (+/–) buttons
Selects station presets when using the tuner.

9 TUNING buttons
Selects the frequency when using the tuner.

10 LISTENING MODE buttons

STANDARD
Press for Standard decoding and to switch between the various Pro Logic II options.

ADVANCED SURROUND
Use to switch between the various surround modes.

STEREO/DIRECT
Switches direct playback on or off. Direct playback bypasses the tone controls and channel levels for the most accurate reproduction of a source.

11 SIGNAL SELECT
Use to select an input signal.

12 MIDNIGHT/LOUDNESS
Use Midnight when listening to movie soundtracks at low volume.
Use Loudness to boost the bass and treble at low volume.

13 SPEAKERS
Use to cycle through the speaker system: A → B → A+B

14 MONITOR
Press to switch tape monitoring on/off.

15 TONE
Press this button to access the bass and treble controls, which you can then adjust with the MULTI JOG/INPUT SELECTOR dial.

16 QUICK SETUP

17 VIDEO INPUT

18 DIGITAL IN

19 FL DIMMER
Use this button to make the fluorescent display (FL) dimmer or brighter.

20 INPUT ATT
Use to attenuate (lower) the level of an analog input signal to prevent distortion.

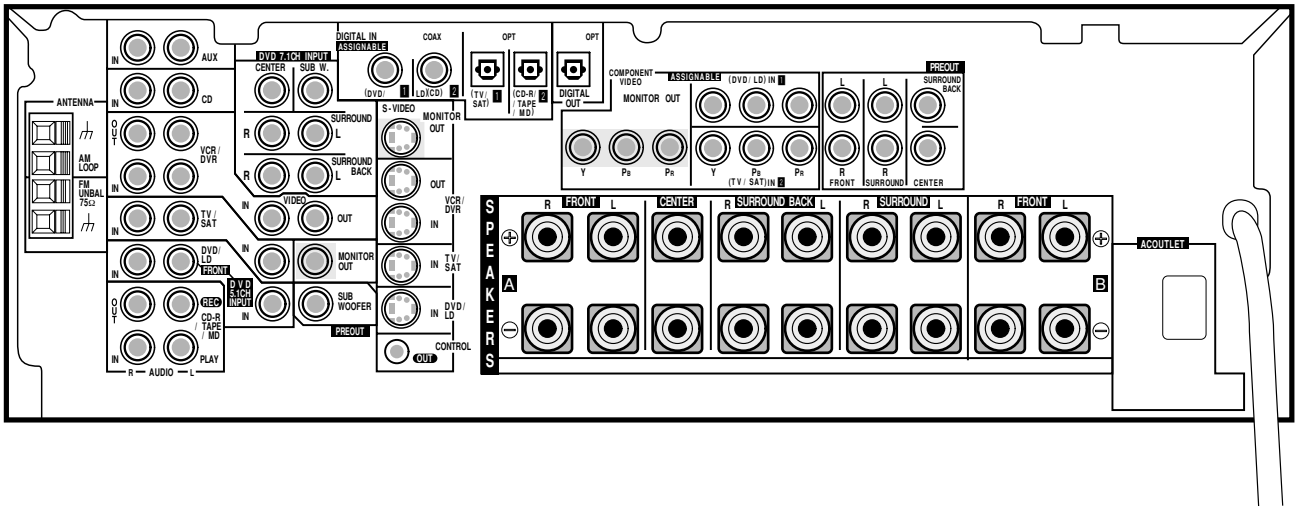
21 MPX
Press to receive a radio broadcast in mono.

22 BAND
Switches between AM and FM radio bands.

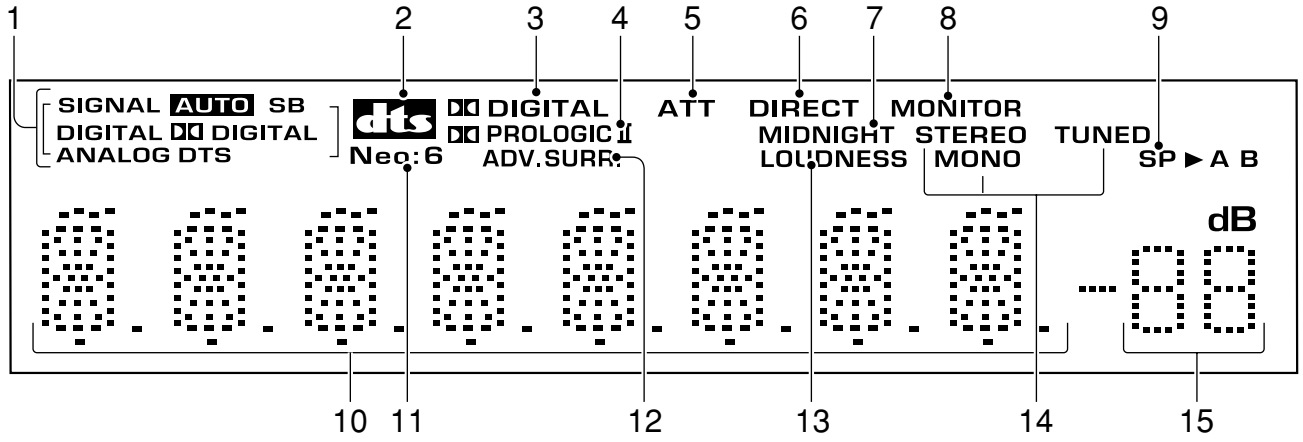
23 CLASS
Switches between the three banks (classes) of station presets.

24 TUNER EDIT
Press to memorize and name a station for recall using the STATION +/– buttons.

Rear Panel



Display



1 SIGNAL SELECT indicators
Lights to indicate the type of input signal assigned for the current component:

AUTO
Lights when AUTO signal select is on

SB
Depending on the source, this lights when a signal with surround back channel encoding is detected.

DIGITAL
Lights when a digital audio signal is detected.

DIGITAL
Lights when a Dolby Digital encoded signal is detected.

ANALOG
Lights when an analog signal is detected.

DTS
Lights when a source with DTS encoded audio signals is detected.

2 DTS
When the Standard mode of the receiver is on, this lights to indicate decoding of a DTS signal.

3 DIGITAL
When the Standard mode of the receiver is on, this lights to indicate decoding of a Dolby Digital signal.

4 PRO LOGIC II
When the Standard mode of the receiver is on, this lights to indicate Pro Logic II decoding.

5 ATT
Lights when INPUT ATT is used to attenuate (reduce) the level of the analog input signal.

6 DIRECT
Lights when source direct playback is in use. This function bypasses all tone, balance, Advanced surround, and Dolby Surround effects.

7 MIDNIGHT
Lights during Midnight listening.

8 MONITOR
Lights when MONITOR is selected

9 Speaker indicator
Shows the speaker system currently in use.

10 Character display

11 Neo:6
Lights during NEO:6 processing

12 ADV. SURR (Advanced Surround)
Lights when one of the Advanced Surround modes has been selected.

13 LOUDNESS
Lights when LOUDNESS has been selected.

14 TUNER indicators

STEREO:
Lights when a stereo FM broadcast is being received in auto stereo mode.

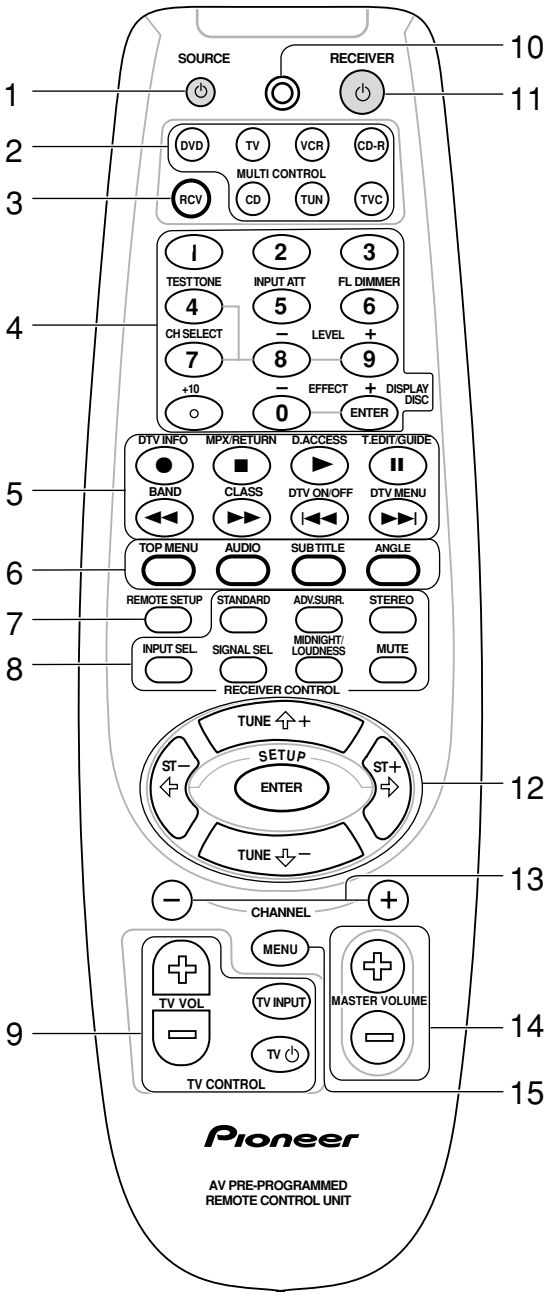
MONO:
Lights when the mono mode is set using the
MPX button.

TUNED:
Lights when a broadcast is being received.

15 Master volume level
Shows the overall volume level. ---dB indicates the minimum level, and –0 dB indicates the maximum level.

Depending on your level settings for each channel, the maximum level can range between –10 dB and –0 dB.

Remote control



1 ⏻ SOURCE
Press to turn on/off other components connected to the receiver.

2 MULTI CONTROL buttons
Press to select control of other components (see Controlling the Rest of Your System).

3 RCV
Switches the remote to controls the receiver (used to select the features above the number buttons. (ex. INPUT ATT, FL. DIMMER). Also use this button to set up surround sound.

4 Number buttons/Receiver controls/ENTER
Use the number buttons to directly select a radio frequency or the tracks on a CD, DVD, etc.

DISPLAY/DISC (ENTER)
The button's use depends on the component selected. It can be used to switch the display between the station preset name and the frequency for the tuner, enter commands for TV or DTV, and can also be used to select a disc in a multi-CD player.

Receiver Controls
Press the RCV button first to access the functions above the number buttons. The display flashes when it isn't possible to use a function.

TEST TONE
Sounds the test tone when setting up the surround sound of the receiver.

INPUT ATT
Attenuates (lowers) the level of an analog input signal to prevent distortion (when the overload indicator lights).

FL DIMMER
Dims or brightens the display.

CH SELECT
Selects a speaker when setting up the surround sound of the receiver.

LEVEL +/–
Adjusts the levels of the surround sound of the receiver.

EFFECT +/– buttons
Adds or subtracts the amount of effect with different advanced listening modes (except 5 or 6 Ch Stereo and Virtual SB).

5 Component/Tuner controls
The main buttons (►, ■, etc.) are used to control a component after you have selected it using the MULTI CONTROL buttons. The tuner/DTV controls above these buttons can be accessed after you have selected the corresponding MULTI CONTROL button (TUNER or DVD (when connected to DTV)).

DTV INFO
Use to bring up information screens on a digital TV.

MPX/RETURN
Switches between stereo and mono reception of FM broadcasts. If the signal is weak then switching to mono will improve the sound quality. Also acts as a stop button for CDs, tapes, or DVDs.

D. ACCESS
After pressing, you can access a radio station directly using the number buttons.

T. EDIT/GUIDE
Press to memorize and name a station for recall using the STATION +/– buttons. Also displays the guides on a digital TV.

BAND
Switches between the tuner AM and FM bands.

CLASS
Switches between the three banks (classes) of radio station presets.

DTV ON/OFF
Switches a digital TV on/off.

DTV MENU
Displays menus on a digital TV.

6 DVD controls (Press DVD first to access)
These controls will also function as DTV controls, depending on the component you've selected.

TOP MENU
Displays the disc 'top' menu of a DVD.

AUDIO
Changes the audio language or channel.

SUBTITLE
Displays/changes the subtitles included in multilingual DVD-Video discs.

ANGLE
Switches camera angles on discs with multi-angle scenes.

7 REMOTE SETUP
Press this button to set up the remote control to control other components.

8 RECEIVER CONTROL buttons

STANDARD
Press to switch between the various Dolby/DTS modes

ADV. SURR.
Use to switch between the various surround modes.

STEREO
Switches direct playback on or off. Direct playback bypasses the tone controls and channel levels for the most accurate reproduction of a source.

INPUT SELECT
Use to select the input source.

SIGNAL SELECT
Use to select between an input signal.

MIDNIGHT/LOUDNESS
Switches to Midnight or Loudness listening.

MUTE
Mutes the sound (or restores the sound if it has been muted).

9 TV control buttons
These buttons are dedicated to control the TV assigned to the TVC button. Thus if you only have one TV to hook up to this system assign it to the TVC MULTI CONTROL button. If you have two TVs, assign the main TV to the TVC button.

TV VOLUME +/–
Use to adjust the volume on your TV.

TV INPUT
Use select the TV function.

TV ⏻
Use to turn on/off the power of the TV.

10 LED DISPLAY
This display flashes when a command is sent from the remote control.

11 RECEIVER ⏻
This switches between standby and on for this receiver.

12 ⇦⇨⇩⇧ (TUNE/ST +/–) /ENTER
Use the arrow buttons when setting up your surround sound system (see pages 38–43). Also used to control DVD menus/options and for deck 1 of a double cassette deck player. Use the TUNE +/– buttons to find radio frequencies and use ST +/– to find preset stations.

13 CHANNEL +/–
Select radio station presets. Also skip tracks backward or forward on CDs, DVDs, etc.

14 MASTER VOLUME +/–
Use to set the listening volume.

15 MENU button
Displays the disc menu of DVD-Video discs. It also displays TV and DTV menus.